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MAZAMA

A Record of Mountaineering
in the Pacific Northwest

NESIKA KLATAWA SAHALE

Published by THE MAZAMAS
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MAZAMA

A Record of Mountaineering in the Pacific Northwest

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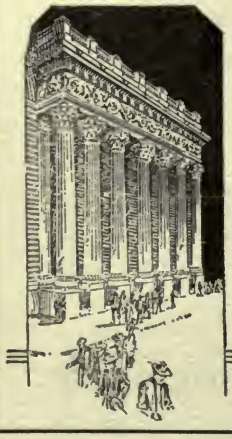

"There is surely no greater wisdom than well to time the beginnings and onsets of things."

—Bacon

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MAZAMA

A Record of Mountaineering in the Pacific Northwest

Edited by JAMIESON PARKER

VOLUME VI PORTLAND, OREGON, DECEMBER, 1920 NUMBER 1

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Thou too, hoar Mount! with thy sky-pointing peaks,
Oft from whose feet the avalanche, unheard,
Shoots downward, glittering through the pure serene
Into the depth of clouds that veil thy breast,—
Thou too again, stupendous Mountain! thou
That as I raise my head, awhile bowed low
In adoration, upward from thy base
Slow travelling with dim eyes suffused with tears,
Solemnly seemest, like a vapory cloud,
To rise before me,—rise, O, ever rise,
Rise like a cloud of incense, from the earth!
Thou kingly spirit throned among the hills,
Thou dread ambassador from earth to heaven,
Great hierarch! tell thou the silent sky,
And tell the stars, and tell yon rising sun,
Earth, with her thousand voices, praises God.

—COLERIDGE: *Before Sunrise, in the Vale of Chamouni.*

Mt. Baker, from Shuksan Ridge

Photograph by F. H. Kiser, 1906

Camp Sammons, looking north.

Photograph by R. H. Bunnage.

MAZAMA

VOLUME VI DECEMBER 1920 NUMBER 1

The Mount Baker Outing *of* 1920

By JAMIESON PARKER

To a number of participants the 1920 outing meant the renewing of an old quest. Mt. Baker is well known to the Mazamas, and, it may be said without hesitation, is well loved by them. In 1906, and again in 1909, their annual outing was dedicated to a better acquaintance with this beautiful and fascinating mountain, which presents so many interesting features, and so many perplexing problems to the climber. The surrounding region, too, is one of alluring interest and beauty; indeed, it is impossible to dissociate the great white mountain from its profoundly impressive setting.

The ascent of Mt. Baker from the north presents some serious difficulties. In 1906 the Mazamas attempted the climb from the north side, with their camp located at Galena Lakes. Under the leadership of Mr. F. H. Kiser a party of six men reached the summit directly from the north, accomplishing what is perhaps the most brilliant feat in the history of mountaineering in the Northwest. Messrs. John A. Lee and R. L. Glisan also made the ascent that year, by a route which took them around to the east side of the mountain before they started to climb the actual dome. The main party of Mazamas, however, was unable to reach the summit, the chosen route proving to be impracticable for a large party. In 1909 the camp was made on the south side of the mountain, near Deming Glacier. The ascent was made by way of Easton Glacier without serious difficulty, and, although a highly successful achievement, it nevertheless failed to answer fully the challenge of the north side, which until 1920 was relentlessly maintained for fourteen years. Thus it was with more than merely a desire for a pleasant outing that the Mazamas set forth upon their pilgrimage this year.

It was decided to establish camp in Austin Pass, at a point about three miles east of the 1906 camp-site, and at an elevation of approximately 4,200 feet above sea level. Several weeks in advance of the outing Mr. L. E. Anderson visited the prospective camp-site and made a highly favorable report. Later on it was he who preceded the main party to superintend the packing in of supplies and the establishment

of the camp; how successfully these tasks were accomplished is well known by all who came afterwards to enjoy their results.

On July 31, late at night, the main party, consisting of forty-five persons, assembled at the Union Station in Portland and boarded sleeping cars bound for Seattle. Upon our arrival there next morning we were quickly transferred to the waterfront, stowed aboard the good ship *Sioux*, and left to the mercy of the steward, who in the course of time provided breakfast for us, with a triple choice of ham, eggs, or both. It was a clear, sunny day. The trip to Bellingham, Washington, will always remain a pleasant memory, especially as we recall the thrills of anticipation aroused by occasional views of Mt. Baker, shining white on the horizon and gradually expanding as we threaded our way northward through the channels of Puget Sound. We docked at Bellingham late in the afternoon, and repaired to our hotel, where arrangements had been made for our reception. Here we were greeted by Mr. Charles F. Easton, Historian of the Mt. Baker Club of Bellingham, and by him were shown the exhaustive monograph on the mountain which he has been years in compiling. To those of us who were making our first acquaintance with Mt. Baker it was a most instructive and interesting introduction.

The party had by this time increased to sixty persons, by the addition of five who joined us at Seattle and ten more at Bellingham.

On the following morning, August 2, we found a line of automobiles awaiting us; so "Eastward ho!" was the word, and away we sped. The road was smooth and straight, the air was crisp, and the sunshine bright. Best of all, our mountain loomed before us, crowned with a gleaming halo of sunshine. We followed pavement as far as Deming; then turning off to the left, a rougher road led us on up the north fork of the Nooksak River. At several points there seemed scarcely room for our machines between the forest trees and the mad white water, so closely did we follow the stream. On and on we went, charmed by the constantly changing pictures, until suddenly and quite unexpectedly we stopped. We had reached Excelsior, the end of the road. There was little delay in beginning our journey on foot, for we knew that fourteen miles of mountain trail lay between us and our camp, and it was already past noon.

The first long hill, in the hot sunshine and sheltered from the wind, was a veritable baptism of fire; but a shady grove welcomed us at the top, and here a refreshing stop was made for lunch. Thence we followed the comparatively level trail up the Nooksak, through miles of forest, with now and then an alluring glimpse of snowy mountains through the trees. At the Shuksan Ranger Station we left the

old trail and turned to the right on a new trail, a short-cut route only recently completed for our benefit by courtesy of the U. S. Forest Service.

The remainder of our journey to camp, a much-disputed distance of four miles, was a painfully direct introduction to the topography of the Mt. Baker region, and when at last the ever-skeptical pilgrims began to see the sky of Austin Pass through the trees, it was with a feeling of meek acquiescence in all previous descriptions of this rugged country.

Before dark the last of the wayfarers had arrived. We found the cook-tent, which, as all mountaineers know, is the pivotal point of camp life, well located in the midst of a most beautiful environment. We were in a gently rolling alpine valley, with precipitous mountain slopes on both sides. Mt. Baker was hidden by the fortress-like mass of Table Mountain, but to the east, over the shoulder of a near-by ridge, Mt. Shuksan's picturesque form loomed impressively into the sky. Northward stood Ruth Mountain and the distant pinnacles of the Skagit Range. Night closed in, however, before we had fully realized the beauties of the landscape, for each of us was faced by the all-important details of obtaining dinner, identifying his dunnage, and finding a resting place for the night.

Camping, the first night, was necessarily a matter of making the best of scant opportunities, and there were perhaps several who spent a part of the night in wakeful anticipation of the morrow. Dawn came, and with it a bustle of activity which by noon had accomplished miracles. Tents appeared like mushrooms. A corps of enthusiastic volunteers built seats for the dining table, and even though there may have been enough pitch on them to make us linger at our meals, we had but the trees to blame.

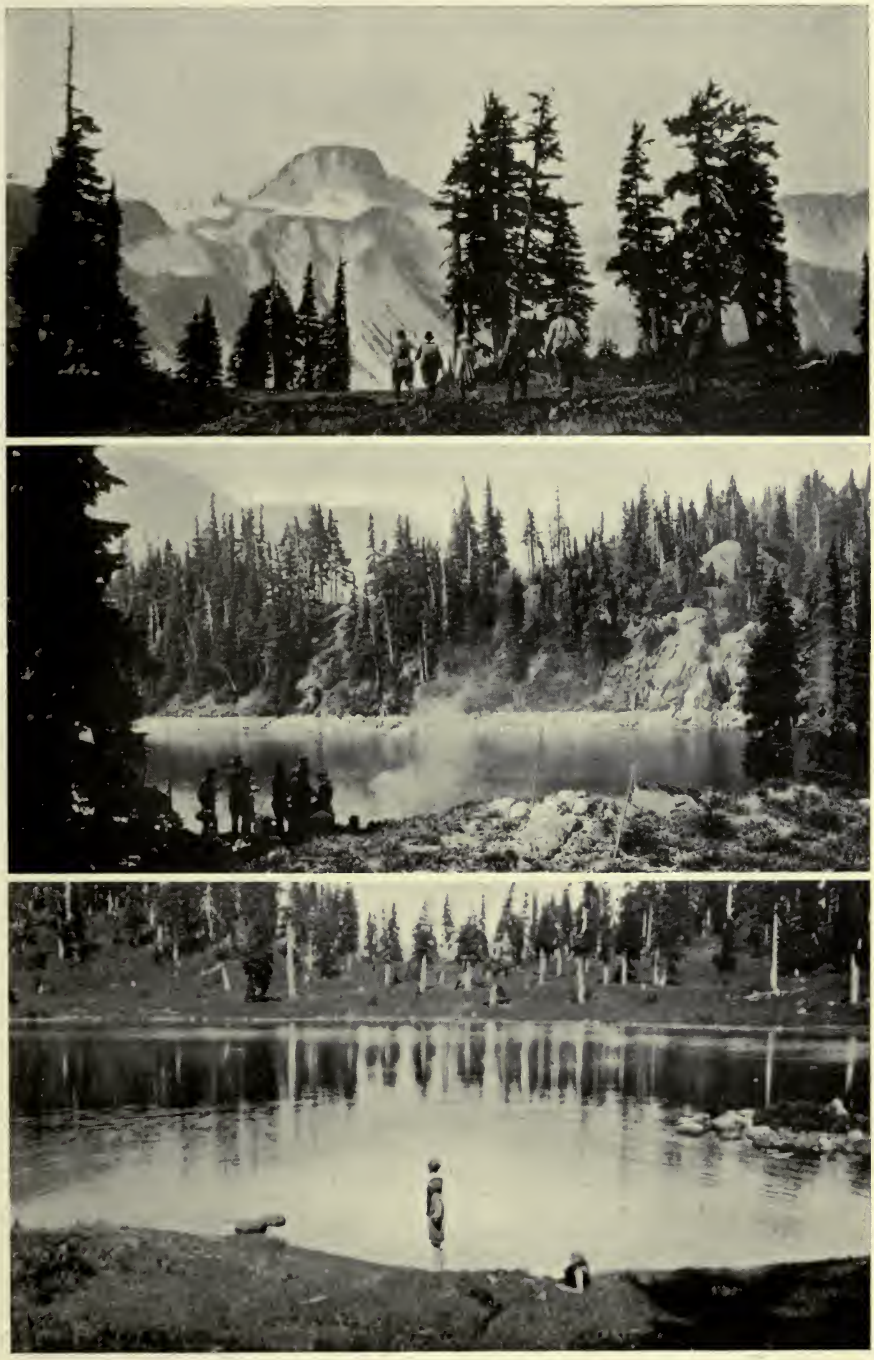
As early as this first day in camp, in spite of its necessary domestic activities, there was evidence of the spirit of restless ambition which characterized the whole outing. By evening everyone had familiarized himself with the valley and its beautiful lakes and groves, and many had scrambled up the steep slopes of Austin Pass, Table Mountain, and Shuksan Ridge to get their first views of Mt. Baker from the north. At sundown Camp Sammons was officially christened, and the stars and stripes were raised above us.

A secondary objective of the outing was the ascent of Mt. Shuksan, and as the Baker and Shuksan trips would each require nearly three days, with two nights in a temporary camp, it was imperative that the reconnaissance expeditions be made as soon as possible in order to allow a practicable program for the two official ascents. Accordingly it was decided that the two parties should proceed simultaneously.

On Wednesday morning, August 4, the Shuksan scouting party started on their trip, the personnel being as follows: Mr. E. F. Peterson, leader, and Messrs. Harry L. Wolbers, Frank M. Redman, George Hartness, and Francis D'Arcy.

The Mt. Baker party, consisting of Mr. John A. Lee, leader, and Messrs. E. C. Sammons, J. R. Penland, and Jamieson Parker, left camp shortly after noon. Mr. Lee is one of the foremost mountaineers of the Pacific Coast, and the veteran of a number of previous expeditions to Mt. Baker; it was therefore with a feeling of strong confidence that the party set forth. The plan was to spend the night at Camp Kiser, the Mazamas' bivouac camp of 1906, named at that time in honor of Mr. F. H. Kiser. This spot is on Ptarmigan Ridge, about a quarter of a mile beyond Coleman Peak. The route followed by the scouting party took them over the eastern shoulder of Table Mountain, down into the saddle between Ptarmigan Ridge and Table Mountain, and thence along Ptarmigan Ridge in a direct line towards Mt. Baker. Camp Kiser was reached before sunset, the only remarkable incident of the afternoon being a face-to-face encounter with a native Mazama "billy" thirty or forty feet away, at a narrow point on the ridge. He surveyed his two-legged brothers with calm dignity for three or four minutes, apparently unwilling to give them the right of way, then slowly and rather contemptuously turned and descended a precipice of rock to the snow-fields below with as little concern as would be shown by a human Mazama in sauntering down a broad staircase. At Camp Kiser Mr. Lee made a study of the face of the mountain, which strengthened his conviction that the only practicable route to the summit was by way of the moraine which lies between Park and Boulder glaciers. Once on this ridge, he was fairly sure of success, for in 1906 he had, with Mr. Glisan, followed the ridge from timber-line to the summit. This route of ascent, however, meant working around to a point where the final climb to the summit is made from the east and south; the problem was to find a safe, direct route from the northeast base of the mountain up and diagonally across Park Glacier to a point high up on the lateral moraine beyond.

The following morning, however, brought realization of the preliminary difficulties. After a long descent from Camp Kiser came a steady upward drag over the snow to the hog-back extending across Epley Portal, and then another discouraging descent before the base of the actual cone of Mt. Baker was reached. From this point on and upward to the head of the Park-Boulder moraine, the selection of the best route was a matter of constant care and cool judgment, for the glacier was seamed with wide, deep, and complex crevasses. Between



Upper—Leaving camp for Table Mountain. (*Photograph by E. C. Sammons.*) Middle—Lunch at one of Galena Lakes. Lower—One of the lakes near the camp. (*Photographs by Ivanakeff*).

Photograph by E. F. Peterson.

Photograph by R. H. Bunnage.

Photograph by A. S. Peterson.

On the official ascent of Mt. Baker

and around all these dangers Mr. Lee guided his companions with practically no loss of elevation. Needless to say, there were unanimous expressions of relief and satisfaction when the rocks of the moraine were reached. But the problems of trail-breaking were not all behind. A short distance above the head of the moraine ice was encountered and it was necessary to cut steps over several hundred feet of the steeper slopes. As a crowning obstacle the party was confronted by a steep, icy cornice about twenty-five feet high, moated by a deep crevasse with a single snow bridge by which access might be had to the wall above. The bridge was crossed, and by taking advantage of a shallow diagonal groove or chimney in the ice and cutting deep steps, a rather precarious ascent was accomplished. From here to the summit the route was simple and direct. After gaining the saddle between the main and secondary peaks the summit was attacked directly from the south. At four in the afternoon the party stood on the crest of the dome. They did not tarry there long, however, for they realized that already the eastern side of the mountain was in shadow and remembered the icy slopes just below. After a vain search for the old Mazama record box, the downward trip was begun. The descent of the cornice and steeper ice slopes necessitated the exercise of great care and consequent loss of time; more delay was caused by attempts to find better routes in several places, and in spite of all possible speed on the snow slopes, darkness overtook the party with a stretch of badly crevassed glacier still between them and their temporary camp. The only safe expedient was to wait until daylight. A mass of rocks near-by was adopted as the most favorable setting for the vigil. The air was unusually mild, and though entirely unprepared for a bivouac, the party spent the night without great discomfort. The first glimmer of dawn saw them on their way. After a hearty breakfast and a refreshing rest at Camp Kiser, they returned to the base camp by way of Galena Lakes.

The Shuksan scouting party spent two days on their reconnaissance returning to camp Thursday evening, August 5. With respect to difficulty of access from Camp Sammons the ascents of Mt. Baker and Mt. Shuksan are quite similar. In each case the preliminary problems of approach constitute an important stage of the trip. Mr. Peterson and his companions did not reach the summit of Shuksan, but they succeeded, after some very strenuous work, in finding the best method of attack. The only feasible route to the summit, so far as known, is by way of the long snow-field which slopes down towards the south from the pinnacle. Camp Sammons lay in a northwesterly direction from the summit of the mountain; hence the approach to this snow-

field involves a fairly long trip over some extremely rough country. From Austin Pass the route is through the head of Swift Creek Canyon, over Dewey Ridge and into Shuksan Creek Canyon; thence in a southerly direction along the western face of the mountain until a point is reached where the steep slope can be climbed.

It was thought best to make the official ascent of Mt. Shuksan first, leaving the Mt. Baker trip until later in order to allow those to participate who were expected to arrive in camp at the beginning of the second week. Saturday, August 7, was decided upon as the date of departure; thorough preparations were made for a three-day trip, and soon after breakfast the party of twenty, including four women, left camp and filed up the valley under the leadership of Mr. E. F. Peterson. The details of the trip are described by Mr. Thaxter in another article and will not be repeated here. The expedition was a perfect success from every point of view. Returning to camp on Monday at noon, six hours ahead of their scheduled arrival, the party had achieved a record of which Mazamas may always be proud. Not one of the original party failed to reach the summit, although the trip was extremely arduous.

A number of interesting shorter trips were made during the first week of the outing. These were valuable to the participants, not only as being of great interest in themselves, but also as a thorough preparation for the more strenuous undertakings to follow. A large party climbed Hermann Mountain, directly west of camp and over 6,000 feet in elevation. On another day the entire length of Table Mountain was traversed from Austin Pass to Mazama Dome, and a visit was made to Galena Lakes, the site of Camp Sholes in 1906. Messrs. Bunnage, Cone and Rimbach made a noteworthy trip to Hannegan Pass and Ruth Mountain.

Already Camp Sammons had assumed a familiar, home-like aspect; already the little inter-communicating trails were well worn, individual camps developed to provide the maximum of comfort, customs established, friendships made, and standing jokes fabricated. All the background of camp life was complete,—already stamped upon the mind more indelibly, perhaps, than the impressions of years amid conventional environments. All the landmarks of our valley were dear to us. Returning from a trip, the tired wanderer would rejoice at the first view of camp, and would unconsciously say to himself, "Home again!"

The neighboring lakes were each visited, and most of them tested for swimming; popularity settled upon a beautiful little sheet of water that nestled in a round, sandy basin just below the Austin Pass bench-

mark, about ten minutes' walk from camp. Its bordering groves and grassy banks were the scene of gatherings every day. As practically all the trips, long and short, took us into the vicinity of "the bathtub," the pleasant custom was established of topping off each excursion with a refreshing swim before returning to camp for dinner. Galena Lakes, though not so accessible from Camp Sammons, were tempting on account of their beautiful environment and the clearness and depth of their waters. On Sunday, August 8, almost the entire personnel of the camp joined in an official excursion to these lakes. Starting about 10 a. m. they proceeded to the head of Austin Pass, then turned westward and climbed over the saddle of the divide which lies between Table Mountain and Hermann Mountain. A leisurely lunch was had at almost the identical site of the cook-tent in the 1906 outing. A number of the party spent most of the afternoon in Natatorium Lake, which was particularly popular because of the perfect place for diving formed by a precipitous rocky wall extending far below the water.

That most delightful institution of Mazama outings, the evening camp-fire, was developed at Camp Sammons in accordance with the best traditions. Wit, philosophy, song, dance, and burlesque,—all were there in endless variety. The mock wedding was a memorable social event, when pretty little Ruth Shuksan, sometime known as Leroy E. Anderson, forsook the primrose path of maidenhood to become the blushing bride of gallant young Austin Pass Baker, alias Alfred F. Parker. Mr. Bronaugh tied the love-knot. A wedding present was made a condition of the previous invitation,—perhaps a social *faux pas* on the part of Mrs. Shuksan, but, thanks to the noble response of the guests, a clever and entertaining scheme. It is to be regretted that a photographic record was not made of the bridal procession, for no description can do it justice.

The president's own afternoon tea party was another gala occasion. This time full dress was required. Hawaiian waitresses served refreshments, while the Skagit String Orchestra, consisting of Professor Spitonhischinski and the celestial Wun Lung, made music. But the afternoon was not all frivolity. Several talks and poetical expressions of the happy realities of life will long be remembered by those who were assembled there on that bright summer day. The address of Mr. Montague should become a part of the literature of the mountains, for it expressed faithfully the feelings of those who know and love the free life.

Some say that the greatest zest in life arises from its contrasts. If true in general, it is doubly so in the life of the mountaineer. It would be hard to say which is the more enjoyable,—the day of cease-

less effort—of the romance of exploration and discovery,—or the day of delicious rest in camp. Probably no answer could be satisfactory, for each gains its peculiar charm by juxtaposition to the other. Certain it is that all the keenness of this contrast was felt by those who decided to join the official Mt. Baker party, for on the morning of Wednesday, August 11, the very day after the president's tea and the Shuksan-Baker nuptials, the start was made. There were forty-one aspirants from Camp Sammons, of whom twelve were women. The party was further swelled by five men engaged in mining operations a few miles from camp. "Chef" Hall was one of us. About half-past ten the party was mustered and started on its way. Mr. Lee was guide for the expedition. By noon we reached a grove just above the saddle between Table Mountain and Ptarmigan Ridge, and stopped here for lunch. It was a restful spot, but lingering was not the order of the day. After descending into the saddle, we began our gradual climb towards Camp Kiser, following the snow-fields on the western side of Ptarmigan Ridge. The day was bright and warm. A rather slow pace was set, for we were all quite heavily laden with our beds and provisions for three days. After the long steady pull up the side of the ridge, a steeper climb to the left brought us to the crest just beyond Coleman Peak, and then we saw our haven before us. Camp Kiser, as compared with the majority of mountain bivouac camps, is almost luxurious; at all events, it seemed so that fine afternoon. An abundance of firewood and water, enough level ground, and fir boughs for beds,—who could want more? We arrived in ample time to prepare and enjoy our dinner and make up our beds before dark. The fire seemed a particularly warm and friendly companion that night, surrounded as we were by the awe-inspiring solemnity of the mountain landscape. No doubt there were some who were tempted to enjoy its cheering influence after dark. But discretion prevailed, and by nightfall there was silence in camp.

The experience of the scouting party had shown the necessity of an early start the following morning. At one o'clock President Sammons, in his most efficient manner, began the day by rousing the cook; the spirited conversation that ensued was a reveille call for those who slept, and half an hour later the business of breakfasting had begun. By three o'clock the last preparations had been made, the roll called, and all being in readiness, we made the start of our final effort. Dawn came as we plodded up the snow-fields towards Epley Portal. The route followed from Camp Kiser was practically the same as that taken by the scouting party. At Epley Portal we "painted up," and the previously appointed leaders roped their parties together. The

Mt. Baker, from Camp Kiser.

Photograph by F. H. Kiser, 1906

Upper—Looking west from the summit. (*Photograph by F. H. Kiser, 1909*). Middle—Summit of Mt. Baker, August 12, 1920. (*Photograph by H. S. Babb*). Lower—Typical crevasses on Mt. Baker. (*Photograph by E. F. Peterson*).

leaders were as follows: Messrs. John A. Lee, E. C. Sammons, Edgar E. Coursen, Roy W. Ayer, and E. F. Peterson. The five miners formed a party of their own. By half-past five we had begun to thread our way between the crevasses of Park Glacier. Many changes were noticeable, due to the heat of the sun during the past week. Crevasses had opened, snow bridges had melted to dangerously frail proportions or fallen entirely, and in a number of instances Mr. Lee found it necessary to make circuitous paths around openings which had been crossed directly on the previous trip. In spite of these hindrances we reached the moraine between Park and Boulder glaciers in good time for lunch. It was pleasant indeed to rest on the warm, dry rocks after nine hours of almost continuous snow work. Above the moraine, steps were cut in the ice as before. The difficulty of the ice cornice was met by securing a rope with iron spikes driven at the top and bottom of the wall, and in this way the ascent was made with comparative ease and valuable time saved. After we had passed this last obstacle, all went smoothly. The summit was reached at 3:30 p. m. As is so often the case in the month of August, a smoky haze obscured Puget Sound and the most distant mountains, but the views of the surrounding country on all sides were magnificent beyond description. There is an indefinable quality of grandeur inherent in this Mt. Baker region which has never failed to leave a peculiarly powerful impression upon the minds of all who have visited it. Someone said that day, "There is but one word for it,—colossal!" Perhaps it is this attribute of the region which has lured the Mazamas to it three times. The power of description seems insufficient to convey the feelings inspired by the view from the summit; but rather than quit the attempt in despair one may attempt to name the salient factors which contribute to the quality of the landscape. The topography of the country is peculiarly suggestive of *violence*. There seems to be never a gently sloping mountain side, or a rounded crest. The peaks are serrated, and the streams run in canyons. An impression of chaos is predominant. Proximity to the Pacific Ocean plays an important part in the painting of the picture, for it is from this source that the moist winds come, giving the mountains their profusion of snow-fields and mighty glaciers, filling the valleys in summer with cascading streams, and bringing the generous rains which water the great forests and all the luxuriant vegetation clinging to the mountain sides, even up among the glaciers. These are the three prime factors—the extraordinary ruggedness of the topography, the abundance of snow and ice on the mountains, and the profuse vegetation—which combine to give the landscape its peculiarly impressive character as viewed from the top of Mt. Baker.

The elevation of the mountain has been established by the U. S. Geological Survey as 10,750 feet above sea level.

At 3:30 that afternoon, August 12, 1920, there was assembled the largest number of persons that had ever stood at one time on the summit of Mt. Baker. There was further cause for gratification in the fact that this had been a "one hundred per cent climb"; the forty-six who had started together had arrived together. A new record book and box were placed in the snow. No signs of the former one were seen.

At four o'clock the descent was begun. After having passed over the icy places, a fast pace was set in order to make sure of passing the last of the crevassed areas before dark. So destructive had been the heat of the sun that changes were visible even in the few hours since the ascent. In one place a snow bridge, none too secure in the morning, had been so weakened that a fixed life-line was used in crossing it. Mr. Lee expressed the opinion that if the ascent by this same route had been attempted a few days later, it would have been found practically impossible. Fortunately the descent was accomplished without any long delay. It was already dusk when we reached the end of the last snow-field and commenced the final laborious climb up to our camp on the ridge. By nine o'clock the last of the party had arrived.

It was a well-deserved rest that awaited us at Camp Kiser; we had had an eighteen-hour day's work, with a half-hour stop for lunch and another half-hour on the summit. If the camp had seemed luxurious the first night, it was heavenly this time. Chef Hall won a warm place in our hearts not only through his culinary talents, but because of his good sportsmanship; tired as he must have been, and unused to mountaineering, he insisted on maintaining his autocratic command of the commissary and cook-fire.

The mountain scenery did not fascinate us as on the night before; we had climbed over too much of it during the day. But when the bright, fresh morning came and showed our mountain rising above us, it was with a new and more friendly interest that we examined its snow-fields and saw the wicked-looking crevasses that we had triumphantly passed. Perhaps in our exultation we felt like the Irishman who said, "Kelly's the worst divil of a fighter in all Ireland, and it's a hard time I had to lick him!"

Breakfast that morning was the first leisurely meal that we had had since the start of our expedition. But the thought of still better comforts at "home" was a strong incentive to move on; so we bade a fond farewell to our hospitable little camp and began the "last lap"

of our journey. The miles passed swiftly on the long down-hill snow stretches. Then there came the final climb over the shoulder of Table Mountain, with the reward at the crest of seeing the white tents of Camp Sammons below. We reached camp in time for lunch. No prodigal son ever sat down to a more bountiful meal, for the ladies who remained in camp, with Miss Martha Nilsson and Miss Selma Flodine as guiding spirits, had apparently done nothing during our absence but prepare for this reception. To cap the climax, they had gathered huckleberries and made a most amazing number of luscious pies. It need scarcely be said that justice was done the pies in an equally amazing manner.

In spite of all the joys of our past two weeks and the still delightful realities of the present, a certain sense of sadness came over us as we realized that there remained only one more day in camp. We were determined to spend it as pleasantly as possible. By unanimous verdict it was found that the first requisite was more huckleberry pies, so all through the morning the berries came in, each person bringing his quota of one cupful. The result more than justified the effort.

Then there was the official afternoon swimming party in one of the larger lakes below camp. The sun was warm, and as we swam in the placid water we revelled in the luxury of it and feasted our eyes on the beauty of the surrounding landscape, with its groves and flower-decked meadows, and Mt. Shuksan rising like a mighty cloud into the sky. Truly, this was life as it ought to be!

At sundown, while we stood with bared heads and sang "The Star Spangled Banner," Old Glory was furled, after having waved over Camp Sammons for two weeks.

The camp-fire that evening brought to an end, and to a climax, the memorable series of entertainments. First there came the address of congratulation by President Sammons and presentation of summit badges to the forty-six who had conquered Mt. Baker. The ladies who had remained in camp and received us on our return with such royal hospitality were each presented with a bouquet. There were several talks; there was music, and the old songs sounded unusually sweet to us that night; bursts of laughter followed each shaft of wit, particularly as the repartee shot back and forth between the "Shuksanites" and their belittlers. But the *piece de resistance* of the evening was the ceremony of "initiation" solemnly performed upon the applicants for membership in the club. Hilarity was uncontrolled as the Sacred Goat with his mysterious antics carried each of the blindfolded novitiates through all the vicissitudes of mountain-climbing experience. Then, after having served his noble purpose, and brought all the candidates safely

back from their instructive ride, the order was given for the cremation of the faithful animal. The four ex-presidents who were present—Messrs. Lee, Bronaugh, Ayer and Coursen—were appointed pall-bearers, and to the slow strains of Chopin's Funeral March they bore the once-prancing steed to the fire and solemnly committed him to his last resting place. A strange silence fell upon the spectators during this procedure. To be sure, it was all burlesque; yet somehow the music and the action had touched a sensitive chord,—perhaps it was because we suddenly realized once again the inevitable truth that all things must come to an end, and that this was the last time we would encircle the genial radiance of that fire, under the happy spell of good-fellowship, and watch the rising moon over Mt. Shuksan. No doubt our president was imbued with this thought when he announced that on this last night "owl sessions" of unlimited duration were in order. Good use was made of the privilege, and it was late indeed when the last fire died and the last song ended.

Camp was broken early on the following morning—Sunday, August 15. By four o'clock the community began to stir. Much had to be accomplished in a short time in order that the entire personnel might breakfast and make a sufficiently early start to arrive at Excelsior by noon. Most important of all, the cook-tent had to be dismantled, the equipment packed, and the pack train started on its way with all the worldly goods of Camp Sammons. Under the energetic direction of our president, the many preparations for departure progressed smoothly and by six o'clock the last of the main party had passed over the brow of the little knoll below camp. Many there were who stopped at its crest for a moment to take a farewell look upon our valley. Never had it seemed more smilingly beautiful than in the quiet sunshine of that early morning.

Mr. Sammons, with a small crew of selected helpers, remained to dispose of the general camp equipment and attend to the packing. It may here be said that no account of the outing would be complete without due tribute being paid to President Sammons and the important part played by him throughout to make the camp which bore his name a credit to the organization and in retrospect one of the most pleasant of Mazama memories. His personality pervaded, and made better by its presence, every phase of camp life.

The fourteen-mile tramp back to Excelsior was made in due time. Shortly after noon the last of the party had arrived, including Mr. Sammons and his labor battalion. Our automobiles started promptly and speedily carried us back to Bellingham in time to catch a late afternoon train for Seattle. By this time the sudden drop in altitude,

Camp Sammons, looking south towards Austin Pass.

Photograph by E. C. Sammons.

Upper—Lunch time. Middle—The president's tea. (*Photographs by Ivanakeff*).
Lower—Virginia reel. (*Photograph by H. S. Babb*).

after two weeks' life in the rarefied air of the uplands, had produced its natural effect, and until we had arrived in Seattle, dined, and finally sought refuge in the Portland-bound sleeping cars, our energies seemed to be concentrated solely upon efforts to keep awake. Probably never was the Pullman sleeper more highly appreciated,—certainly it was never utilized to greater advantage. Morning found us again in Portland.

In many respects the outing might be considered perfect. From the most important standpoint—that of mountaineering achievement—there can be no doubt of it, for our primary and secondary objectives had been attained with record-breaking success. The weather is an important factor in the enjoyment of any outing; from start to finish it had been all that could be desired. Not a drop of rain had fallen. The administration of the camp could not have been improved. The meals were excellent,—unusually good, even for a Mazama camp. For comforts such as these last, and for many others untold, we owe our thanks to the conscientious efforts of the outing committee,—Mr. Ayer, Miss Nilsson, and Mr. Merten.

But when we think of the spirit of Camp Sammons, let us not place it in the category of perfect things. To do so would rob it of its subtlest charm, and remove that fine savor of personality which must live with us like the memory of some profoundly impressive being who has passed through our lives. Mere perfection is a mathematical formula. But this memorable spirit will come back to us with all its variety of attributes—ups and downs, sunshine and shade, firelight and starlight—combined in such a way as to form a thing apart, and, like the other best things in life, filling a place all its own.

When Time, who steals our years away,
Shall steal our pleasures too,
The memory of the past will stay
And half our joys renew.

—*Thomas Moore.*

Personnel *of the* 1920 Outing

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LeRoy E. Anderson, Portland, Ore.
†*Roy W. Ayer, Portland, Ore.
LeRoy Ayer, Jr., Crawfordsville, Ore.
*Harold S. Babb, Portland, Ore.
John F. Benson, Bellingham, Wash.
†*E. Boehme, Portland, Ore.
*Jerry E. Bronaugh, Portland, Ore.
*Edward A. Brown, Portland, Ore.
†*R. H. Bunnage, Portland, Ore.
*J. Weston Chase, Portland, Ore.
*Ethyl P. Chase, Portland, Ore.
Marguerite Colpitts, Portland, Ore.
† Donald I. Cone, San Francisco, Cal.
†*Edgar E. Coursen, Portland, Ore.
A. J. Craven, Bellingham, Wash.
Francis D'Arcy, Vancouver, Wash.
Bessie Day, Eugene, Ore.
Ilse K. Delbruck, Portland, Ore.
Charles F. Easton, Bellingham, Wash.
Selma Pauline Flodine, Portland, Ore.
*H. A. Freed, Portland, Ore.
†*F. G. Franklin, Salem, Ore.
Kenneth F. Frazer, Portland, Ore.
†*Bernice J. Gardner, Portland, Ore.
†*F. Giesecke, Portland, Ore.
*W. A. Gilmour, Portland, Ore.
*Margaret A. Griffin, Portland, Ore.
*H. B. Hall, Portland, Ore.
George Hartness, Portland, Ore.
*Clarice L. Hoff, Seattle, Wash.
Ernest E. Howard, Kansas City, Mo.
Bertha Hunter, Portland, Ore.
†*Jennie Hunter, Portland, Ore.
Alice C. Hutchinson, Portland, Ore.
Pasho Ivanakeff, Portland, Ore.
*Neill James, Hattiesburg, Miss.
*David T. Kerr, Portland, Ore.
K. H. Koehler, Portland, Ore.
Mrs. K. H. Koehler, Portland, Ore.
*John A. Lee, Portland, Ore.
*Mary Knapp Lee, Portland, Ore
Lucy M. Lewis, Corvallis, Ore.
†*Ethel Mae Loucks, Portland, Ore
†*A. H. Marshall, Vancouver, Wash
Mrs. G. B. Maxwell, Portland, Ore.
George Meredith, Portland, Ore.
Daisy L. Meredith, Portland, Ore.
Alex Milton, Bellingham, Wash.
*Richard W. Montague, Portland, Ore.
Christine N. Morgan, Portland, Ore.
*Anna Nickell, Seattle, Wash.
Martha E. Nilsson, Portland, Ore.
Cinita Nunan, Portland, Ore.
†*Doris M. Olsen, Portland, Ore.
*Alfred F. Parker, Portland, Ore.
*Jamieson Parker, Portland, Ore.
†*John R. Penland, Albany, Ore.
*C. M. Pendleton, Portland, Ore.
*Esther Penwell, Portland, Ore.
†*R. A. Perry, Portland, Ore.
*Arthur S. Peterson, Portland, Ore.
†*E. F. Peterson, Portland, Ore.
Arthur D. Platt, Portland, Ore.
†*Frank M. Redman, Portland, Ore.
†*Rudolph W. Rimbach, Portland, Ore.
*E. C. Sammons, Portland, Ore.
*Katherine Schneider, Portland, Ore
†*Fred L. Smith, Bellingham, Wash.
Mary Gene Smith, Portland, Ore.
Sydney Sommerville, Pendleton, Ore.
†*B. A. Thaxter, Portland, Ore.
Anna M. Turley, Corvallis, Ore.
Louise O. Vial, Portland, Ore.
Annette Wiestling, Seattle, Wash.
†*Harry L. Wolbers, Portland, Ore.

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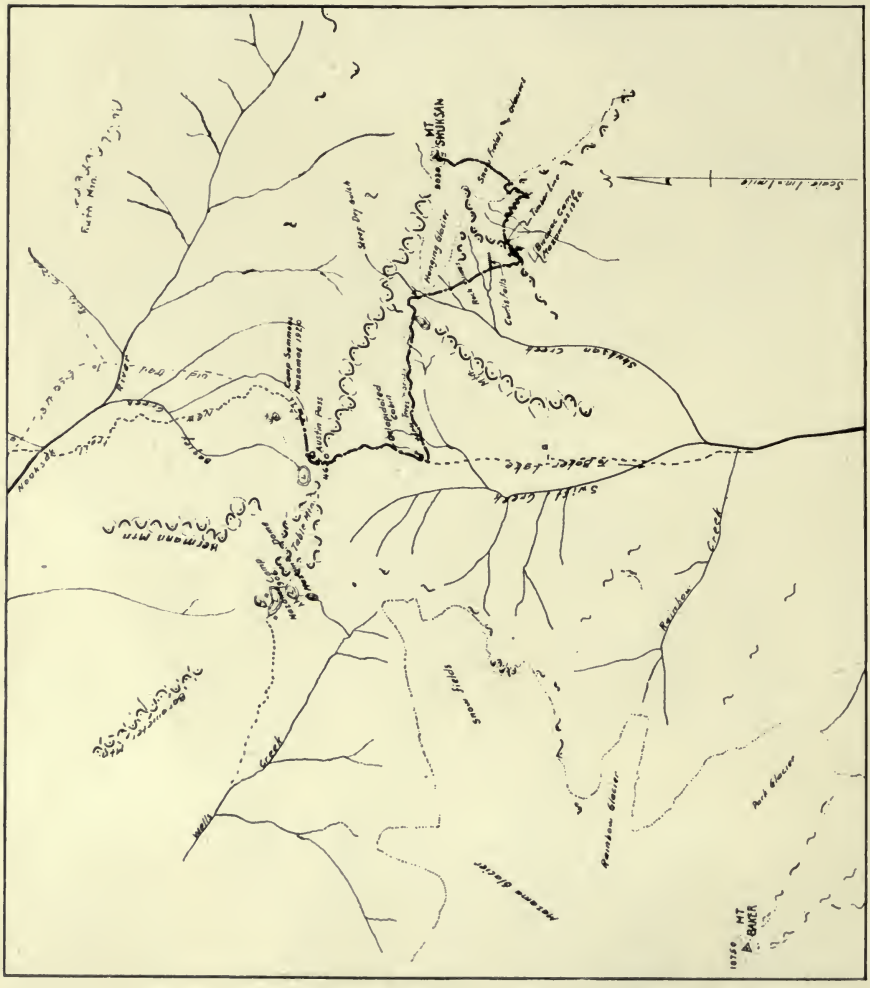
* Climbed Mt. Baker.
† Climbed Mt. Shuksan.

Photograph by F. H. Kiser, 1906.

Mt. Shuksan, from Shuksan Ridge.



Drawn by John R. Penland.

Sketch map showing route taken by Mazamas from Camp Sammons to summit of Mt. Shuksan, August 7-8, 1920.

The 1920 Ascent *of* Mount Shuksan

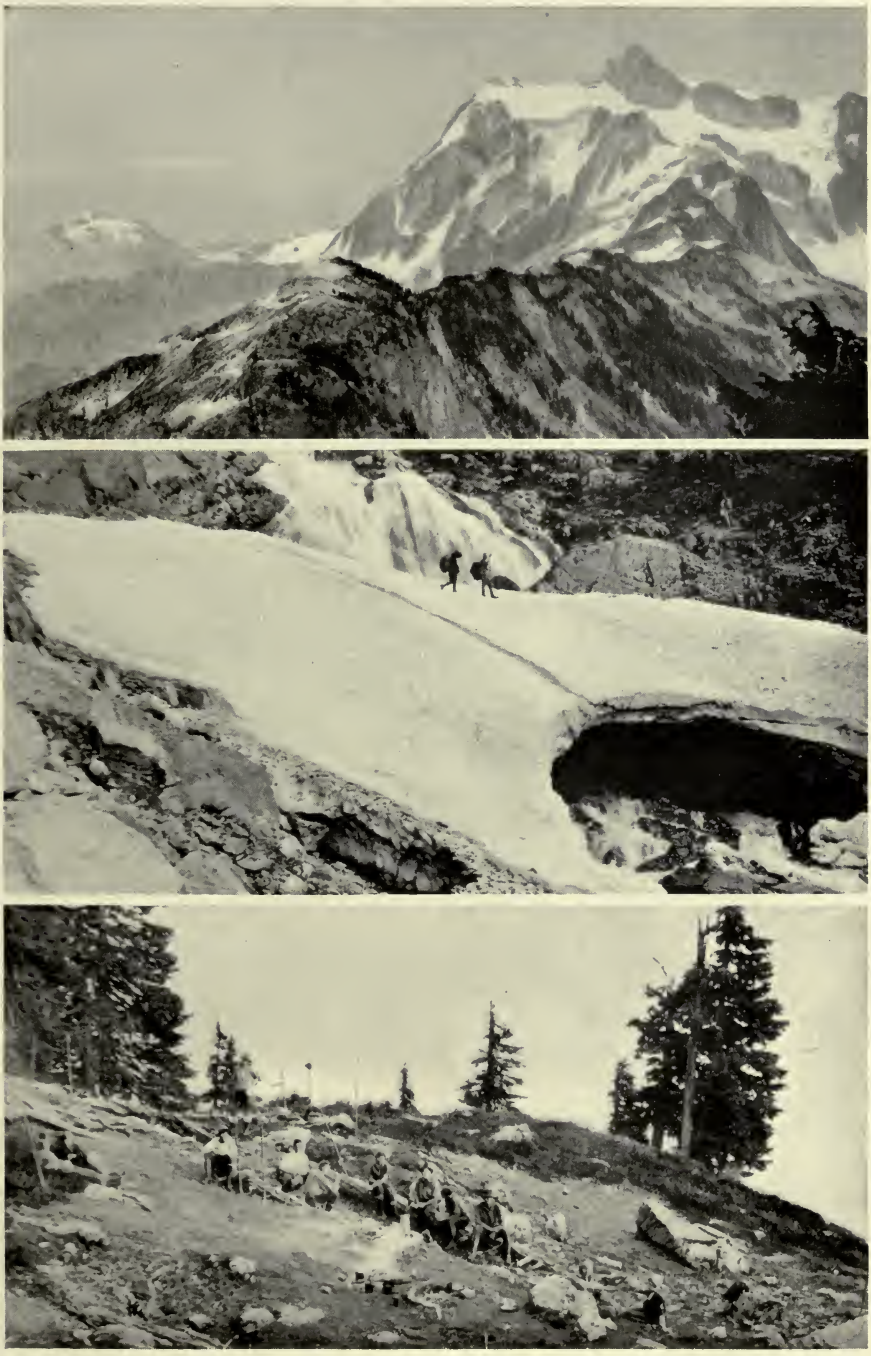
By B. A. Thaxter

A few miles east of Mt. Baker rises the rugged pile of rock known as Shuksan. It is not a very high peak, as peaks in the Cascades go, its altitude being only 9,038 feet; but every part of the ascent, from base to topmost crag, is full of interest for the climber. It is not an easy climb, and only a chosen few have ever stood on its summit. In August, 1906, during the Mazama outing in that region, the first recorded ascent was made by W. B. Price and Asahel Curtis. Later, Price made the ascent alone, and again in 1916, leading a party of twenty-five "Mountaineers" from Seattle, he succeeded for the third time in reaching the top. The fourth ascent was made by a party of twenty Mazamas during their annual outing in 1920. Others have said that they, too, have scaled the peak; and possibly they have, but the fact remains that as yet none of their claims have been substantiated.

On August 6, 1920, the scouting party sent out from Camp Sammons a day or two before returned and reported that while they had not hit upon the exact route taken by the earlier climbers, they felt sure that they could lead us to our goal. While the report was not altogether encouraging, the days were flying by and we knew that if we were to conquer Shuksan it had to be done before we made the Baker climb. There was no time for further scouting. We talked the matter over round the camp-fire that night and decided to set out the next day. We knew the trip would be a hard one; we knew we would be away from permanent camp for at least three days; and we knew that it would mean packing our sleeping bags and provisions on our backs over some very rough country. Yet the following morning found a company of twenty intrepid souls—sixteen men and four women—eagerly preparing for the trip. At 9:45 a. m., escorted by a number who were saving their energy for the climb up the higher peak, we marched up the hill past "the old swimming hole" to the cairn that marks the trail over Austin Pass. From there our way led down Swift Creek for about a mile and a half. Then, at the ruins of an old log cabin, we swung off abruptly towards the southeast into a maze of thick brush and scrambled through a mat of huckleberry bushes up the side of the long ridge that lay between us and Shuksan Creek Canyon. About noon we came out on Dewey Ridge, and here, near beautiful little Lake Ann, we lunched and bade our escorting party good-bye.

Right at our feet was the precipitous wall of Shuksan Canyon. Peering down over the rim we saw far below us the creek which must be crossed before we could make much real progress towards our goal; facing us across the canyon was one of Shuksan's beautiful hanging glaciers, breaking into most magnificent seracs as it poured over the edge of the wall; and stretching along for miles towards the south was the ridge on whose rocky side we knew we must pass the night.

While we were preparing for the descent into Shuksan Canyon, E. F. Peterson, the leader of our party, accompanied by E. E. Coursen, who had been with the Mountaineers' party in 1916, and one or two others, went on ahead to locate if possible what had been the route of prior climbers of Shuksan. A few minutes later, the remainder of our party literally dropped down over the wall to the floor of the canyon, using the bed of a dried-up water course as a sort of toboggan slide. This was our first bit of dangerous going, and the descent was slow and arduous. We reached the bottom without mishap, however, and were soon following the roaring creek down its rocky bed, beneath the overhanging glaciers, with our eyes fastened on a spur of the mountain where we felt sure our temporary camp must be. Our advance party were not in sight, and we had dropped a mile or more down the canyon before one of us descried Mr. Coursen high above us on the side of the eastern wall, signalling to us to come up there. The advance party had stumbled upon the trail made by the 1916 climbers, which is, as far as we could ascertain, the only practicable route out of the canyon to the slopes of Shuksan. We now turned our faces directly east, straight up the side of the ridge, and followed a long snow-field up to a stream that came pouring down over the face of the cliff. Crossing this on a snow bridge just below the falls, we soon came to Curtis Falls, through the spray of which we had to pass. And now the real climb began. Up we went along the side of the precipice, now clinging to a jutting knob of rock as we swung around some projecting bluff, while our heavy packs were constantly threatening to pull us into the depths below; now finding some hand-hold among the heather and dwarf huckleberry bushes and pulling ourselves up foot by foot towards the top of the spur. Not long after this, we met our leaders, who had found a way to a bench where they thought we might make our camp, and had returned to encourage the rest of us and guide us to the place. It was 6:30 p. m. when we had all climbed on to the bench to find ourselves standing on the exact spot where our Seattle friends had made their camp four years before. Dry wood was soon collected, water was brought from a near-by rivulet and in an incredibly short time our supper of bacon, toast and



Photographs by R H. Bunnage.

Upper—Mt. Shuksan from Table Mountain. Middle—On the way to the temporary camp
Lower—Temporary Camp.

Photographs by R. H. Bunnage.

Upper—Summit of Mt. Shuksan, August 8, 1920. Lower left—The source of Shuksan Creek. Lower right—On Shuksan's long snow-field.

hot tea was disappearing as if by magic. Our sleeping bags were spread out on the heather and before dark all were tucked away for the night. Some of us slept; some of us lay and looked at the heavens, studded with brilliant stars apparently hung so low that it seemed almost possible to reach up and grasp them with our hands; some of us, a little after midnight, fanned the smouldering embers of our camp-fire into flame and lay close to its friendly warmth.

At 4:00 a. m. everybody was roused. Breakfast was soon prepared, and at 5:37 our line was formed and we were off once more. We climbed slowly but steadily over several steep heather-covered benches where the footing was most treacherous, scrambled over loose rock ridges, worked our way up narrow rock chimneys and zigzagged across precipitous snow-fields where we had to cut steps in the ice, all the time keeping a general southerly course. A number of mountain goats were seen by various members of our party on that morning climb. A "nanny" with her kid had been seen just behind the camp when some of us went for water. Others had been seen on the high slopes in the distance. But in order that every member of our party might have the opportunity to see a real, sure-enough Mazama, an old patriarch of his flock very obligingly came and stood on the edge of a cliff, perhaps two hundred yards above us, and surveyed us curiously for at least five minutes. When his curiosity was fully satisfied, he deliberately left his "coign of vantage" and disappeared from our view for a time, only to appear later farther up the mountain.

By 8:30 we had reached the top of the ridge and stood on the long snow-field that leads up the southeast side of the mountain to the uppermost pinnacle. We had hitherto been climbing in the shadow, but as we came out into the bright sunshine on the top we made a brief stop to put on grease paint and don our goggles. This snow-field is a remarkable one, for several reasons. Hardly any other peak in Washington or Oregon has so long an unbroken field of snow on its sides. Then, the slope is a very, very gradual one, with hardly a crevasse or break of any kind upon its surface. We found the traveling over the snow to be easy, and consequently made rapid progress. At 10:30 we were at the base of the last great crag which forms Shuksan's top. The day was hot and there was little breeze, so our sweaters and extra wraps had been left some distance below on the snow-field. Where snow and rock met we now left our alpenstocks, and, guided by Mr. Coursen, followed up a chimney at the extreme left of the pinnacle. It was a steep climb and a hazardous one. For a thousand feet above us the wall seemed almost perpendicular; but there was always a way upward. Never once did we have to turn back and

retrace our steps; but let no one think that because of this we encountered no difficulties. This final climb to the summit required the most constant and careful work, for often it seemed almost impossible to find a hand-hold or a place to plant one's foot, and the faces of the cliffs dropped sheer to the glaciers below. Every now and then we would come upon a little patch of phlox or moss campion growing in some sheltered cranny. But we could not pause to admire flowers near us or the prospect below. The urge was ever upward, and every faculty was employed in negotiating that last stiff scramble. At noon, just one hour and a half from the time we had left the snow, we were all on the narrow ridge-like top grouped around the cairn built by Price and Curtis fourteen years ago. No one had faltered in the ascent; no one was distressed or unduly tired. After congratulating each other on our "one hundred per cent climb," we registered in the Mountaineer cylinder and ate our lunch. It was warm up there, without the cooling breeze usually found at such altitudes. Overhead the sky was cloudless. About ten miles away, a little south of west, Mt. Baker towered above us. All around, to the north and east particularly, rose chains of sharp serrated peaks, but the view of the country at our feet was most disappointing. A heavy smoke pall shrouded the valleys and the lower reaches of the peaks and made it impossible for us to get a clear picture of the lakes and streams around us. Due west of us lay Austin Pass, and we could dimly make out some of the tents of our permanent camp. We attempted to signal to the "home folk," but our flashes brought no response.

Shortly before one o'clock we began the descent, which we made easily and without the use of ropes. In fact, nowhere on the climb did we find it necessary to use the ropes we had brought with us. The return to our bivouac camp was uneventful. A few of our party speeded on and had a hot supper ready for the rest of us when we came in at five o'clock. Another night under the stars, an early start the next morning, a quick drop down off the ridge, and we were well on our homeward way. As we were toiling up Swift Creek Canyon on the home stretch, we were met by a party who had come out to escort us back to camp. It was good to see our friends again and to hear all the camp gossip. It was good, too, a little later, when shortly after noon we marched down the trail and found bowls of hot clam soup awaiting us at the cook-tent. Twenty strong we had gone out; twenty strong we had scaled the peak, and now, still twenty strong, we were back home again, tired and hungry, but happy,—and every one of us eager for the climb of Baker which was to be attempted in less than forty-eight hours.

An Ascent *of* Ruth Mountain

By R. H. Bunnage

While the scouting parties on Mt. Baker and Mt. Shuksan were doing heroic work which made possible the subsequent "hundred per cent" climb of each of these mountains, three brother goats were enjoying themselves on the slopes of Ruth Mountain, one of the lesser snow-capped peaks of this region, northeast of Mt. Shuksan and rising to an elevation of 7,200 feet. On August 4, at noon, Messrs. Donald I. Cone and Rudolph Rimbach and the writer departed from Camp Sammons for this thirty-mile expedition.

The trail led down to the Nooksak River, over or rather through which we passed on a log covered with sixteen inches of racing glacial water. Then we crossed Ruth Creek, a beautiful, crystal-clear stream at this time, and began climbing the ever upward but fairly uniform grade along its banks. The wild, rugged mountains of the Skagit Range were on our left, while on the right the jagged peaks of the Ruth Mountain Range were silhouetted against the southern sky. It being the northern side of the latter which was visible to us, each depression between the peaks was filled with a small hanging glacier, which gave the appearance of the range being crowned with a series of gems. Seven miles from the Nooksak River, the canyon of Ruth Creek turned almost due south and we were treated to a sunset view of our objective. Silvery white, with a touch of pink at the summit,—with Ruth Creek Glacier crevassed from side to side, and its lower slopes covered with green, icy seracs,—Ruth Mountain was spread before us. While the sun's last rays played upon and continually changed this view, we traversed the remaining mile to the bivouac camp just below Hannegan Pass. Camp was made at 8:00 p. m. Water, fuel and a heather bed had been provided for us by nature within the radius of a few feet.

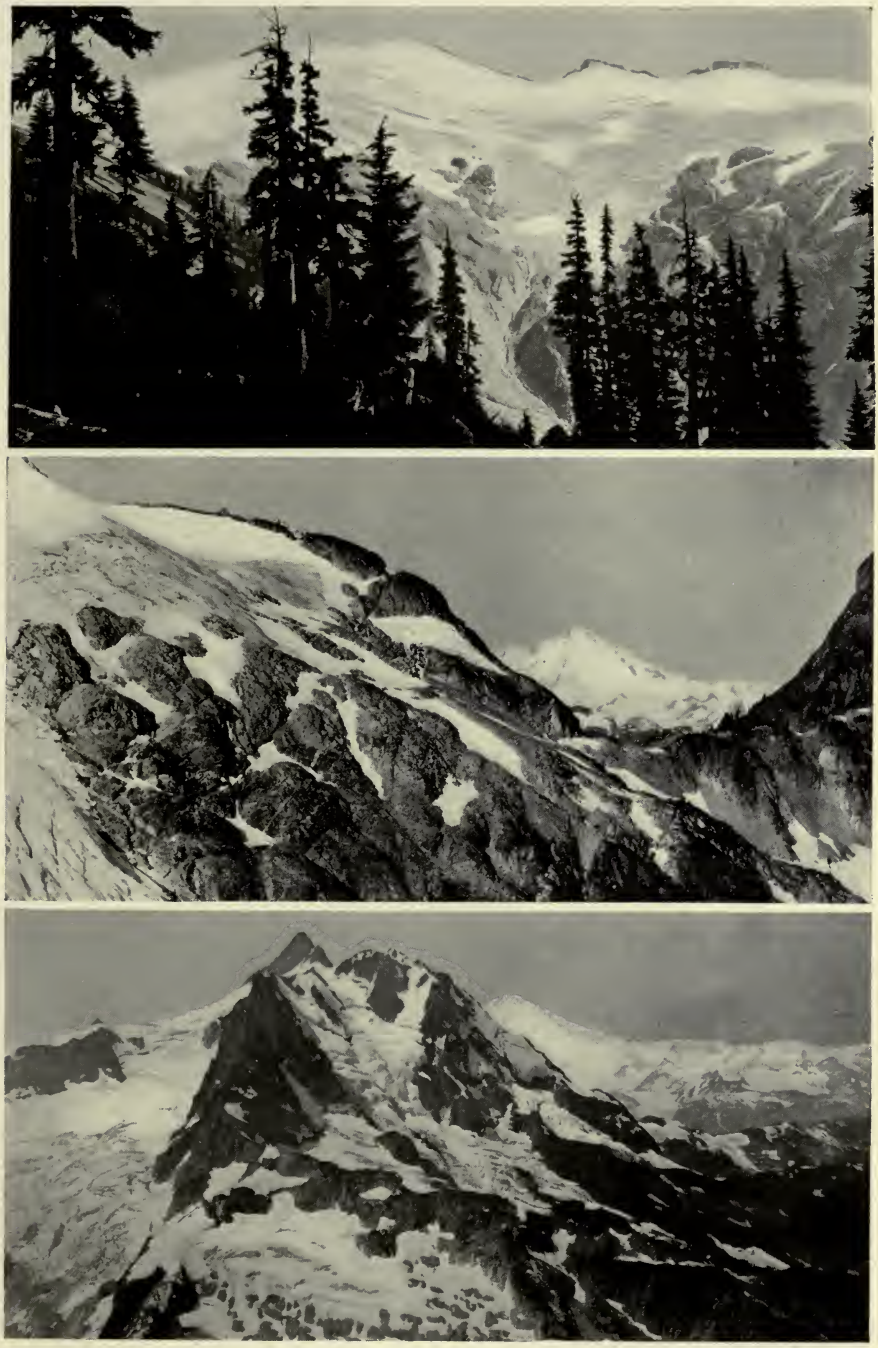
The climb of about 2,600 feet in three miles was started at 6:35 the next morning. A long grind over a shale slide preceded some steep rock work. The climb up the rocks ended on a ridge overlooking Ruth Creek Canyon, Hannegan Pass, and the deep canyon of Beaver Creek on the east. Below us the falls of Ruth Creek roared from the seracs of the glacier above. Framed through a gap in the Ruth Mountain Range was Mt. Baker, the sight of which caused us to wonder as to the success of the scouting parties. It soon became necessary to use grease paint, for we had begun the snow work, following a route studied out the evening before. The glacier was broken by many lateral crevasses

which crossed its entire width and which made the use of a rope advisable. This precaution proved to have been well taken when one of the party went through the covering of a blind crevasse during the descent. One of the largest crevasses opened with a rumble that shook the glacier, just after a photograph of its depths had been taken. We reached the summit at 10:50 a. m. Flashes were sent in the direction of Camp Sammons and were answered from there and from Table Mountain. The view was superb. Through exceptionally clear air, Mt. Shuksan towered above us in the southwest. Its entire northeast side was before us, and masses of ice from the hanging glaciers could be heard rumbling downwards as they broke from the seracs above. Mt. Baker, the Ruth Mountain and Skagit ranges and the unsurveyed country to the east, as well as the snow-capped peaks of Canada, stood out boldly in the clear air. Between them were the canyons of the north fork of the Nooksak, Baker River, and Ruth, Silesia, Chilliwak and Beaver creeks, each one having its source at the base of Ruth Mountain.

After spending an hour and a half enjoying these visual delights and eating our lunch, we descended over the now soft snow, with increased danger from blind crevasses. Arriving safely at the bivouac camp, it was decided to return to Camp Sammons that evening; so packs were adjusted and the return trip begun. The walk was a tiring one, for it was a warm afternoon. We reached the Nooksak River about sunset, and after a short rest, ventured an ice-cold, paralyzing dip in its glacial waters. Imagine, after a day of such exercise, that climb of 2,200 feet in the dark up to Camp Sammons. We had spent much time during the day in taking pictures, and though the results well rewarded our efforts, it was this which caused us to be late in reaching camp. Nothing ever tasted so good as the hot bouillon and tea which were awaiting us, prepared by Miss Nilsson and Mrs. Lee.

The East has her streams, and the West her white foam,
And the South her bland welcome to Spring tripping home—
But the North has her mountains, and dearest are they,
And the North has my heart, to the end of the way.

—*Sir William Watson.*



Photographs by R. H. Bunnage.

Upper—Ruth Mountain from point near Hannegan Pass. Middle—Mt. Baker from above Hannegan Pass. Lower—Mt. Shuksan from Ruth Mountain.

Photograph by F. H. Kiser.

View northward from Austin Pass towards the site of Camp Sammons. Although this photograph was taken in 1906, it shows the landscape, including "the bathtub," almost identically as it appeared in 1920.

Why Do We Come Back?

Address by RICHARD W. MONTAGUE, *at Camp Sammons,*

August 10, 1920

I often ask myself, as I suppose we all do, what is the charm that impels us to turn our backs on all the refinements and luxuries and most of the comforts that civilization has elaborately prepared for us, and to make our way out here into the wilderness where we work hard and fare hard and sleep hard, sweating and shivering by turns, toiling to exhaustion, always vowing to ourselves, sometimes "telling the world," "Never, never, again, if I once get home out of this,"—and then, when the red gods make their medicine next year, coming back, meekly or eagerly, but always coming back, for more of the same.

None of the usual explanations seem to me to account fully for all the facts. Something, no doubt, is due to the stirrings of ancestral instinct, harking back to the time when these surroundings of hill and heather, of the warmth of the camp-fire and the sky overhead, were the theater of all our joys and sorrows, the scene and setting of human life. Something more may be due to the desire of youth to try its powers of achievement and endurance against difficulty and danger, to match its glowing ardors with the toughest opponents it can find; and you who possess these divine gifts of youthful strength and beauty cannot know how glorious they seem in the eyes of us who are going down the westering slope of life, nor how you should value them. Mere love of change may play a part. But other and more potent causes there must be, for many come here who can hardly be drawn by these. Here come men and women in whom generations of intellectual culture and sophisticated life must have quite obliterated the instinct of the savage and the cave-man; some in whom the ardors of youth have long since cooled and its quick pulses slowed and steadied; men to whom the pursuit of their chosen callings affords all the variety their hearts desire; teachers who have left the impress of high character and love of truth on multitudes of youth; men of science impatient for the most part of anything which diverts them from their work; lawyers and men of business enamored of their vocations; engineers and physicians whose achievements the world can ill spare;—all drawn by this strange imperious urge to the harsh embrace of the wilderness, and not with one or two chosen companions, but in a great company of all sorts and conditions of men and women.

One reason I would like to suggest, besides those usually given. The proper study of mankind is man, and (in spite of all the cheap

cynicism current on the subject) there is for healthy-minded men and women nothing of such endless interest and charm as knowledge of other men and women. And here in the wilderness, of all places in the world, we learn best to know one another's naked souls, as that line of Kipling's some one read here the other night has it; to know even as also we are known, in the grave words of the great apostle. Neither good conduct nor bad can be concealed here; every shelter tent and huddle of blankets is a city set on a hill which cannot be hid. No one can carry more than his share of the common load and not be found out; no one can shirk or malinger without advertising it to the whole camp. Moreover, under the conditions of stern simplicity of living and complete social equality which obtain here, it is one's own personal qualities that count and nothing else. In our glen, "kind hearts are more than coronets" and sturdy legs than heaps of pelf. As in all live societies, there is much discussion—gossip, if you will—about people; but I cannot remember to have heard any one out here ask how much another was worth in money; what various persons are worth to the general welfare is the commonest of subjects. Bad temper has here no inferiors to wreak itself on; sloth and incompetence have no hirelings to bolster them up.

One or two consequences of this primitive social state I must notice in passing. It brings about the most remarkable combination of self-help and helpfulness to others I have ever seen anywhere. In the full knowledge of one another's conduct and character is generated a public opinion which really makes people better than they are—at any rate, better than they would be otherwise. Everybody has seen the timid become courageous in the dangers, the mean become generous in the wants and hardships, which are so interesting a part of our common lot in the wild. "I am not mad, but speak the words of truth and soberness," when I say that I have seen young ladies, not friends, genuinely kind to one another on these expeditions. And this public opinion, unsparing and strict against slacking or selfishness, is amazingly tolerant of mere weakness. It awards the most generous and ungrudging approval to courage and prowess, but it does not condemn want of them when not pretentious nor too dependent, especially when it is accompanied by a decent degree of gameness. I do not mean that there are no shadows among all these high lights—that there is no baseness nor meanness here; but I appeal to you if it is not the simple truth that, for the time, our lives are purged in some degree at least of the greed and cowardice and selfishness which make the chief hindrances to human happiness and welfare in the greater world. Here in the open we come upon the heart of humankind, and "see it good as when God first saw,

and gave it the weight of his will for law." It is this experience, novel to all save first lovers and the few who have known friendship at its best, which gives that rare glow to a chance meeting long after with one of our comrades here. It is this contact with the deeper well-springs of truth and courage and kindness in the human spirit that invests the stern wilderness with the charm that draws us back to it again and again. But for these human relationships, noble and sincere in their essence, however temporary, the splendors of the iridescent mist on the face of the snow-peak at dawn, the deepening shadows on the still mountain tarn at dusk, the wheeling march of the starry host above our nightly bivouacs, were but meaningless matter and motion. In the light of them we read nobler meanings in these aspects of nature, austere or lovely; through them we come to realize that

"Not only around our infancy
Doth Heaven with all its splendors lie;
Daily, with souls that cringe and plot,
We Sinais climb and know it not.
Over our manhood bend the skies;
Against our fallen and traitor lives
The great winds utter prophecies;
With our faint hearts the mountain strives;
Its arms outstretched, the druid wood
Waits with its benedicite;
And to our age's drowsy blood
Still shouts the inspiring sea."

Everyone who has been upon a walking tour, living in the open air, with the body in constant exercise and the mind in fallow, knows true ease and quiet. The irritating action of the brain is set at rest; we think in a plain, unfeverish temper; little things seem big enough, and great things no longer portentous; and the world is smilingly accepted as it is.

—*Robert Louis Stevenson.*

The Mount Baker Outing *of the* Mazamas in 1909

How the Wild Goats Stormed Koma Kulshan

By GERTRUDE METCALFE SHOLES

(No full account has hitherto appeared in *Mazama* of the 1909 outing on the south side of Mt. Baker, mainly because the publication of the magazine was suspended for several years, including 1909. As the 1920 outing was the first visit of the Mazamas to Mt. Baker since 1909, it was thought appropriate to publish in this issue the following narrative by Mrs. Sholes. See also "Reminiscences of Mt. Baker," by Dr. W. Claude Adams, in *Mazama* for 1919.—EDITOR.)

Eight daring Mazamas accepted the challenge of Mt. Baker in 1906, wrestled with death and won, while their comrades of spiked boot and alpenstock looked on and marveled. The ascent of the Immortal Six under Kiser by way of the great northeast precipice, and the climb of Lee and Glisan from the southeast, ending in a night on the summit, had saved the day and proved the daring mettle of the Mazamas. The remaining wild goats, shaking the snow of Koma Kulshan from their feet, descended to the haunts of men sore of heart and defiant.

This explains why August 5, 1909, found sixty other aspiring Mazamas bivouacked under the stars on the mountain side six thousand feet below the summit. The people of Deming, lords of the land lying to the west of Baker, had made a trail for us through the trackless wilds, and they and the good citizens of Bellingham had entertained us with princely hospitality.

Dawn of August 6 saw various exploring parties scattering north, east and west from Camp Gorman, bent upon wresting all his ancient secrets from the Great White Watcher.

One group ascending to an elevation of seventy-eight hundred feet, which was about three thousand feet above camp, under the leadership of John A. Lee, found themselves on a splendid unnamed glacier, perhaps the largest on the mountain. Vast snow-fields led up to this little known glacier. We stood in the very citadel of the ice-king, miles of glistening, untrodden snow extending in every direction, for Mt. Baker carries about forty-four square miles of perpetual snow. The passion for exploration set the blood rushing madly in our veins. Into what waters did this great glacier empty its torrents? That was our quest. The seracs poised menacingly on Sherman Peak stood out boldly—a forbidding mountain profile—jagged terrible masses of ice and snow seemingly ready to tumble from their foundations into the

Mt. Baker, from the southwest.

Photograph by F. H. Kiser, 1909

Photograph by F. H. Kiser.

On the official ascent of Mt. Baker, in 1909.

cavernous depths below. Turning towards these seracs that loomed so grandly on the eastern sky-line a mile and a half away, we hiked across the glacier to them, coming suddenly to what seemed to be the rim of the world.

We had stumbled upon the Titan forces of the mountain at their work; it was a glimpse into the process of creation. Directly above us were the colossal overhanging seracs we had seen from afar. It was easy for a timorous soul to be terrorized by the menace of this top-heavy mountainous mass of glittering ice protruding from the sky as though threatening that the hour of doom was upon us. The glacier on which we stood was moving downward imperceptibly at the rate of 50 feet a year. Each shining serac poised overhead on the steep side of Sherman Peak held countless tons of ice in its grasp. Sunshine, the Destroyer, was at work; perhaps a word, a breath might bring this mass of unsteady ice crashing down upon us.

At our feet was a network of great ice chasms leading down into abyss on abyss of sepulchral blue shadows; the walls of many of these were smooth as though cut with a knife; others were jagged as though ruptured by some awful convulsion of nature. We stood in the midst of the appalling wreckage of Sherman Peak, which had lost much of its height since viewed for the first time at close range by Coleman in 1868. Frost, iconoclast of the ages, had been at work. But undoubtedly great avalanches of rock, ice, and snow were thrown off by the tremor of the San Francisco earthquake in 1906, nine hundred miles away. The peak is materially changed.

Chaos surrounded us—chaos wilder than the imagination of man could conceive—yet not without signs of transformation into order; giant forces tearing at the very foundations of the mountain in their work of destruction, yet only to harness, far below, the waters of the sun-racked glacier into rivers for the use of man.

Poised thus on the rim of the world, bounded only by the sky in this vast dazzling white silence pregnant with destruction, we seemed detached from earth, until, glancing downward, we saw that a precipitous cleaver led the eye to a vast panorama far below. The entire unsurveyed southeast base of the mountain and scores of miles beyond lay spread before our wondering eyes, so that they might easily be mapped. Across the velvet gloom of illimitable forests could be traced here and there the shining threads of rushing glacial streams laden with debris from the mountain,—Baker and Skagit rivers, the south fork of the Nooksak, Baker Lake and its U. S. fish hatchery, an electric power plant, the little towns of Concrete and Sedro-Woolley. In the distance were tier upon tier of mountain ranges with hundreds of

unnamed peaks crowding one another against the horizon. The knotty point concerning the geography of this region was now made clear, for from this vantage ground it was certain that the waters from the great unnamed glacier must flow into Baker River.

Explorations of the next few days verified the surmise that this was a double glacier having two outlets to be known later on our maps as Sulphur and Rocky creeks. Our quest was now at an end.

One night, the red glow of the Mazama camp-fire fell upon a group of mountaineers in khaki and corduroy sitting cross-legged before the fire drying their spiked boots,—scarlet sweaters and bright bandannas catching the shifting glow,—while three score eager sun-browned faces were upturned to a man in rough mountain garb; a man for whom the arctic snows that crowned Mt. Baker had a perpetual fascination, whose zest for exploration had on a former occasion brought him into the very jaws of death there on that crystal dome cutting the heavens. Overtaken by night and a raging blizzard while exploring the summit, threading his way among fathomless crevasses in the howling darkness, assailed by stinging sleet, buffeted by the bitter gale, he had saved himself and his three companions by digging a cave in the snow. Thus, for two days and two nights, the days hardly distinguishable from the nights, they had battled with the storm on the summit. No man had given himself with such unquenchable zeal to the study and exploration of this peak as Charles F. Easton, who stood among his fellow club-members recounting the changes he had noted in this "Great White Watcher" of the Indians,—the tremors of the earthquake of 1906, the havoc we had observed in Sherman Peak, that twin summit of the mountain now dismantled by frost and earthquake of its ancient glory, rapidly becoming a colossal, sparkling ruin of stupendous ice-crags, with a loss of five hundred feet in height since Coleman's day. With bated breath we listened as he told us how on the morning of April 18, while engaged in making a drawing of Mt. Baker by aid of of a telescope in Bellingham, simultaneously with the earthquake in San Francisco, an avalanche occurred on the west side of the mountain, loosening a field of ice, "wedge-shaped, one hundred and fifty to two hundred and fifty feet in depth by an average of three thousand feet in width, literally stripping the mountain bare to the rocks and precipitating the ponderous mass down upon the crags and glaciers below. Some idea of the magnitude of this volume of ice can be had by contemplating its removal by two such ships as the Dakota and Minnesota, two of the largest freight carriers in existence, for it would require each of these great vessels to take a full cargo every week for more than

a quarter of a century to handle the tonnage that slipped down the steep slope of Baker in a moment."

As he talked, we resolved that for no one else should our newly explored glacier be named. Accordingly, by unanimous resolution of the Mazamas at camp-fire assembled, it stands on our map of Mt. Baker today as Easton Glacier; and if the will of the Mazamas be carried out, to all men henceforth shall it be so known.

Each night, at camp-fire, some new tale of exploration was recounted until this unknown side of the mountain began to take definite shape on the map. Three days of arduous trail-blazing to the headwaters of the south fork of the Nooksak via Sister Divide, and a morning's catch by seven anglers resulted in a trout supper and breakfast for sixty hungry mountaineers.

With what mingling of awe and rapture we one day discovered a mountain park of virgin beauty hidden from all the world, bounded by a chaos of mountains and forests, open only on the north to the towering snow-peak of Baker, the Great White Watcher which guards these enchanted meadows from profanation. Into this paradise we stumbled one day—fifty acres of sunshine, red and white heather, rare alpine flowers and hungry butterflies—and straightway with true Mazama audacity we claimed it as our own, naming it Mazama Park. The summit of a sharp jagged butte, its ragged edge cutting the sky like a saw 5,400 feet above sea level, soon became a favorite rendezvous for Mazamas. A stream of the purest snow water flowing past the base of this butte descends to the canyon by a picturesque waterfall, which we named Purdue Falls, in honor of a member of our party, Dr. W. E. Stone, president of Purdue University, Indiana.

This new domain of the Wild Goats soon became the scene of mountain sports unlike any known to the world below. Who can forget Field Day, with its uproarious game of baseball between the Sheep and the Goats, Dr. Stone being umpire, and the bleachers, headed by Richard W. Montague, adding to the liveliness of the scene by shouts of "Hit the Solar System!" "Hang the umpire!" "Give them the moon!" "Dough Heads!" There was a three-legged race, a grinning contest, a debate between Mr. A. J. Craven of Bellingham and Mr. Montague of Portland, two old-time chums, which Mr. Montague won by a brilliant pantomime without uttering a word, while Mr. Craven was searching his mind for telling phrases.

Then the mood of the Mazamas changed. On a little knoll a granite monument was built by their hands, and this enchanting meadow was formally dedicated to the Mazamas by President Gorman. Later, at camp-fire, resolutions were offered by C. H. Sholes that the

Mt. Baker and Mt. Shuksan region and the Sisters Range be forever preserved as a national park. This resolution was unanimously adopted by the Mazamas and copies sent to Washington, D. C. This is significant as the first step in the well-known movement to create the Mt. Baker National Park.

Among other landmarks on the southwest slope of Mt. Baker named for or by members of the Mazama outing of 1909, are Deming Glacier, Lee Promontory, Mazama Lake, Meadow Point, Camp Gorman, Cathedral Crag, Craven Falls, Ridley Creek, Bell Creek, Rankin Creek, Gile Creek, Pratt Creek and Loomis Mountain.

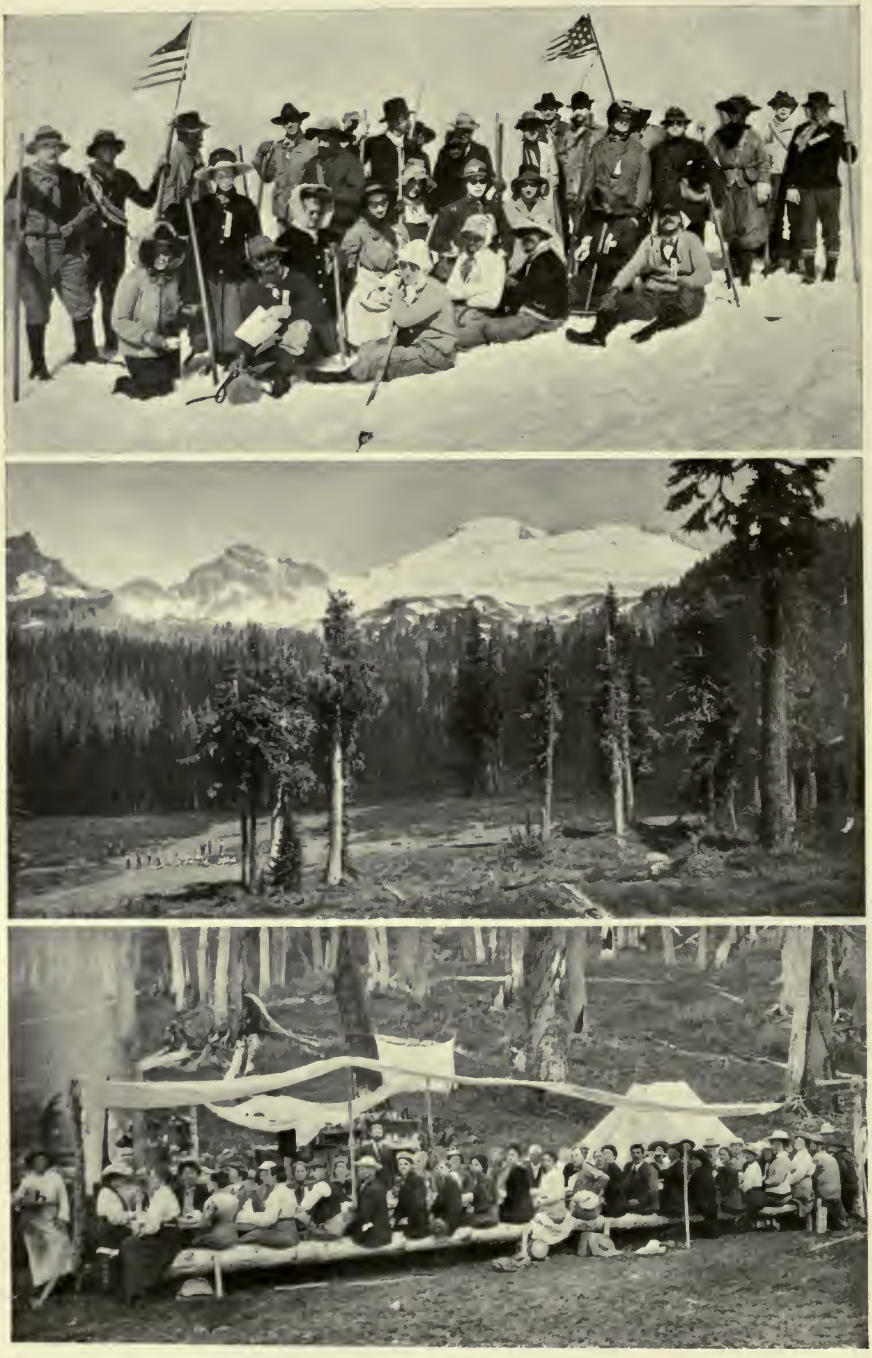
How the forest wilds echoed with laughter when one by one fifty culprits were captured and brought before the Kangaroo Court at camp-fire, Mr. Craven, of Bellingham, presiding with gravity and dignity that could not be shaken by all the shafts which Mazama wit could devise. John A. Lee was the first culprit dragged before this dread tribunal of justice. He was accused by Mr. Montague, prosecutor, of harboring criminals and outlaws, of gathering them from divers cities and settlements below and bringing them to this sacred and isolated park on the mountain, disturbing the peace and elemental calm of this fair and hallowed region,—reckless adventurers, wearing most unseemly garb, profaning the majestic beauty of the groves by their unholy clamor, wild and crazy yells of "Wah-hoo-wah!" desecrating the purity of Mt. Baker's eternal snows by the tracks of their spiked boots, despoiling the mountain streams of fish and the forest of its young fir trees for their beds at night.

After listening with profound sorrow to this charge against one who had hitherto held an honored place in Portland court circles, the judge, with impartial and merciless justice, informed the culprit that he must pay the penalty for his misdeeds by assuming the chairmanship of the Mazama outing committee for the next ten years, which sentence was greeted with shouts of approval.

A racy dunnage-bag song and dance by six maidens under Mrs. E. T. Parsons, glamorous music to the soft notes of the guitar by Dr. Adams and his choir, a beautiful and impressive recitation from "Hiawatha" by Miss Hayek, dainty bonbons, marshmallows and fudge made in camp, delicious ice-cream made of malted milk and frozen in a snowbank, were some of the delectations at our camp-fire. Mingling with all this merriment was heard the "Hoot! Hoot!" of the Owls, a new-born organization. The culmination was the solemn initiation into the Owls of President Gorman, clad in white raiment, mounted on a white burro of maternal proclivities that obstinately refused to be separated from her offspring.

Upper—Near the summit of Mt. Baker. Lower—Mt. Baker and Deming Glacier.

Photographs by Marion R. Parsons



Photographs by F. H. Kiser

Upper—Mazamas on summit of Mt. Baker, 1909. Middle—Mazama Park and Mt. Baker. Lower—Meal time at Camp Gorman.

There was soon a well-worn trail to the summit, and not a day passed without one or more parties making the ascent, for the route presented no special difficulties, being practically the same as that taken by Coleman in 1868. Two men, Walter Armstrong of Portland and R. B. Hess of Bellingham, made the ascent three times in five days. On Sunday, August 8, fourteen climbers reached the summit; one of these, C. H. Sholes, unwittingly broke the record by making the ascent of 6,000 feet from Camp Gorman and return in five hours and twenty minutes, including some delays to assist others; and then, on that same day, he hiked to Deming, twenty-four miles down the mountain. Mr. Sholes had tramped this twenty-four miles eight times within two weeks, as he was in charge of the advance party to prepare camp for the Mazamas, and had been unable to obtain a saddle horse, all available horses being required for the pack train that carried the commissary.

At 4 a. m. on Wednesday, August 11, reveille sounded for the official ascent, and by 5:45 three companies were in line under the leadership of John A. Lee, whose name is inseparably associated with the conquest of Mt. Baker. To the climbers it seemed the hottest day of the year, as at first there was no wind; but no member dropped by the way, and as Easton Glacier was ascended the view became more and more impressive in magnificent range of vision: the snowy crest of Mt. Rainier to the south, the rugged, grand uplift of the Olympics seen across the shining waters and islands of Puget Sound, scores of glistening peaks jostling one another in the Chelan region, with the Twin Sisters and Mt. Shuksan in the foreground, while winding downward from beyond the Canadian line one could trace the Skagit River.

At noon the saddle was reached, and an hour was spent in lunching and gathering crystallized sulphur from the neighborhood of the crater, fumes from which testified to its close proximity. On the steep incline that leads to the summit a call for the ropes was heard.

"No," replied President Gorman, "we will make this ascent without the life-line!" So the ropes were not uncoiled.

No mishap occurred, the ascent proving to be one of the most successful ever enjoyed on any outing of the Mazamas. As no trace of the Mazama box and record book, placed on the summit by the Kiser party in 1906, could be found, the names of the thirty-eight climbers were placed in a bottle and attached to a stake.

A quick descent was made, one member covering the distance in just one hour. All were in camp in time for supper, hungry as bears.

Among the nationalities represented in camp were the United States, Canada, Great Britain, Germany, Holland, Denmark, Sweden, Hungary and Switzerland—thirty-nine men and twenty-one women. But others joined us at the Mazama camp-fires, as separate parties were encamped in the neighborhood, among these being seventeen from Deming, the hospitable and enterprising little settlement whose citizens had constructed the trail to Mt. Baker for the Mazamas, and whose name has been given to the most perfect glacier on the mountain.

The names of those who reached the summit from Camp Gorman are as follows: John A. Lee, Dr. W. E. Stone, Clifford Lee (twice), Anna L. Rankin, Charles Knapton, L. A. Sprague, M. W. Gorman, J. R. Montague, Richard W. Montague, Martin Easton, Charles F. Easton, A. J. Craven, Will D. Pratt, Maude B. Holliday, Dr. W. C. Adams, Joanna Pfaff, Mrs. E. T. Parsons, Sadie Settlemeier, Coston Carver, Henry C. Engberg, Walter Armstong (three times), Dr. Otis F. Akin (twice), Mrs. Akin, Miss Alva Aitken, C. L. Winter, R. B. Hess (three times), E. H. Loomis, Chester A. Wyman, Professor and Mrs. A. N. French, Alice W. Morgan, Martha O. Goldapp, Edmund V. Batstone (twice), Marie A. Rockwell, Mrs. R. D. Hann, W. P. Hardesty, Lon Pebley, D. Mulder, C. W. Whittlesey, Francis Benefiel, A. P. Dean, Dr. Bernhard Hahn, Nels Polson, Katherine Hayek, Dr. L. F. Frissell, Elizabeth David, J. W. Marsh, Mr. and Mrs. C. E. Bell, E. W. Harnden, G. D. Emerson, G. W. Humes, and C. H. Sholes.

Out of the sixty persons in camp, fifty-four ascended the mountain, constituting ninety per cent of the total number in camp. Moreover, inasmuch as some of the number made the ascent two and even three times during the outing, the whole number of ascents made from Camp Gorman rises to a total of sixty-one for the sixty persons in camp, which is certainly rather an unusual record—over 101 per cent!

This was the way the Wild Goats stormed Koma Kulshan in 1909.

To one who has been long in city pent,
'Tis very sweet to look into the fair
And open face of heaven,—to breathe a prayer
Full in the smile of the blue firmament.

—*Keats.*

Mount Baker—Its Name *and* First Explorer

By Arthur J. Craven

"The expectation of five years' solitude and exile was about to be realized, or else delayed until another season had wearily come round. The struggle maintained in the land of the stranger approached its denouement. Was I to stand a conqueror upon the mountain summit, or return with the memory of defeat, to behold it from the shore of my island home?"

—*Coleman, when approaching the snow-line, in 1868.*

To the lovers of this mountain there is indeed much in a name. Nomenclature of geographic locations usually conveys interesting implications as to the characteristics of the place or object designated or concerning its discoverer or first explorer.

The Indians came first, and named the mountain Koma Kulshan, or, more briefly, Kulshan. Their mythology clothed it in mystery. Fear stood at the snow-line and warned them back. When the white man came, the aborigines knew somewhat of the various branches of the Nooksak River, upon which they had hunted and trapped, and they doubtless had ranged some of the foothills of Kulshan for game. The wool of wild goats was interwoven with strands of grass and bark in their blankets.

On the cluttered desk of the writer there are two objects, one apparently a funnel and the other a human figure, probably a rain god. They are carved from rock, reddish brown and porous, evidently pumice which had been hurled from the mountain and washed down the Nooksak. They look much like fragments from Pumicestone Pinnacle. These relics were plowed up from a field near Marietta a few years since. The local Indians who have examined them manifest much curious concern, and suggest that one was a funnel used by the squaws in pouring liquid into their domestic receptacles; of the god, which has a concave surface on the top of his head, with a lowered rim on the side, through which the rain trickled down, they know nothing, or, if they can tell anything, they decline to do so. There are undoubtedly vestiges in their minds of their old religion, which the Christianity they profess has never entirely effaced.

But of the name of the mountain they talk freely and intelligently. Koma means "white" or "shiny." Kulshan is interpreted as "steep"—"tall"—"precipitous." Some Indians, as intelligent as the others, give a further and supplemental meaning; *i. e.*, that it is not only steep, tall or precipitous, but is something which has been broken off or

disrupted at the top. They evidently perpetuate in this way some old tradition that the mountain was at some distant time so shaken by volcanic convulsion as to be diminished in stature.

This loss of stature, however, runs counter to a tradition, which tells than Kulshan actually grew in height for the purpose, according to the legend, of getting a better view of his distant wives and children. Perhaps both theories may be harmonized. Possibly he made his second growth at some time subsequent to his decapitation. Almost anything is possible with a mountain, as any experienced climber well knows.

The original of this tradition was gathered and most beautifully interpreted by Dr. Buchanan, formerly the superintendent in charge of Indian affairs at Tulalip. Its length precludes the insertion here of the original. The following is a brief adaptation which well preserves without additions or subtractions, the general tenor of the story. The peculiar manner and style were doubtless suggested to the writer from his observations of witnesses who are supposed to be "wised up" on English in the trial of Indian cases in the local courts.

"I tell you Indian story about Kulshan. Kulshan, that big mountain on Nooksak. Well, I tell you.

"Long, long time ago, old Indian man he tell his grandchild what his grandfadder tell him when he was little boy. I do not know the time, but it was long, long time. Kulshan he grow up fine young man and git married two wives. One wife, she look very fine. One wife she look fine, too, but not so fine, but she very good, she very kind. Kulshan he like 'em both very much, how different no can tell.

"Well, one wife, long time ago, she git three babies. That other wife she git no baby at all, but she very good to Kulshan, she hug up close. Wife who git three babies she no like it. She very mad. She think Kulshan like other woman better; she hug up close, too. She tell Kulshan she have three babies, he should like her most. But Kulshan he say nothing, he just smile little bit. Then this woman, she try fool Kulshan. She tell him she go way. She no want go way, but she want fool Kulshan. She think Kulshan say, 'Yes, you mother to my children; don't go way, I love you most.' He like her well, he no want her to go, but he no tell her. Kulshan he very proud. He say, 'You want go way, you go way.'

"So she make pack. She think she go just little way and he say, 'Come back.' She make big pack long time—flowers, seeds, roots, berries, all nice things there around Kulshan. She go off, long time ago. She stop and look back, but he no tell her come back. She go on again and stand on hill to see Kulshan; she stand on toe-tip, but that hill grow big and high while she look back. But Kulshan he see her all right, sure, but he very proud; he no say, 'Come back.' She go on and on; where she go and look back a row of hills, mountains now, but not so high as Kulshan. Then she stopped long way off. She sure he no want her back. She stand on high hill and reach up high to see him and her children, and that hill grow to high mountain so she see them plain. She stay

there. That woman she mountain now more high than Kulshan. Indian he call that mountain Takhoma. She scatter all the seeds she bring in big pack, flowers, berries, roots and all nice things she bring. She have more now than Kulshan. He see her there now, way far, high mountain. That wife, her name Clear Sky.

"Well, that other wife her name very hard to tell. It means, very pretty girl, just old enough to marry. She stay with him a long time. One day she tell him she going to git baby quick. She want to go visit her mother. Her mother's home is Hwulch in Indian, but white man say Puget Sound.

"'How you can go home?' Kulshan he say. 'No way, no trail, nothing but rocks, hills and trees.' But he like her well, and she want to go to her mother. So he call all the animals with claws—bears, lions, marmots, beavers, mice and everything that digs, and they dig a long ditch. All the water he turn to this ditch, and it is Nooksak River now. That wife, she go down in big canoe, and when she come to the big water, she leave on every island she go by, a fish, a berry, or something good to eat. So all those islands from Nooksak to her mother's home has Indian name of something to eat, something this wife who was going to her mother left there. She found her mother way out in the water. Then she thought she stand up high in the water so to see Kulshan, but she say, 'No, that other wife she stand up high. I will not stand up high.' She lay down low in the water so that all the peoples could reach her head without climbing.

"This wife she stay there; she never go back. She Speiden Island now, and the little baby is a little island near its mother. Kulshan live alone. He marry no more. He grew taller, so he could see his wives and his children better, and those children near Kulshan they grew taller, too, so they could see better their father and mother.

"Well, I tell you now, what the Indian man, old grandfadder tell his grandchild when he was a little boy. I tell you all. You know Kulshan and his two wives and the children, what they are and where they are. I talk no more."

This tradition, exhibiting as it does "the everlasting triangle," and so much more of human nature that is known to be true, makes a strong appeal to one's interest; and as for its revelations of geology, so fraught with their ponderous anthropological analogies,—well, it is only one more theory to be added to the perplexities of the geologist.

Manuel Quimper, a Spanish exploring officer stationed at Nootka, first put the mountain on the white man's map in 1790, giving it the name of "La Gran Montana del Carmelo," an appellation which the subsequent school children of America have cause to rejoice was speedily changed. This Spanish name was a courtesy to the order of monks known as the Carmelites. They had established their abode on Mount Carmel in Palestine, overlooking the blue Mediterranean. They adopted as the dress of their order a flowing white robe, and for centuries were known as the White Friars. The mantle of white upon the mountain, reaching down to the dark green of the foothills, doubtless suggested the name.

This name, probably from the function of the monk in guarding the destinies of those in his especial charge, has found poetical inter-

pretation in the phrase, "The Great White Watcher." Edmond S. Meany has adopted this as the title of a beautiful tribute of verse which he wrote for the Mt. Baker Club.

The names "Kulshan," "The White Friar," and "The Great White Watcher" will never be divested of their distinctive allusions by reason of the use of "Mt. Baker" as the official name and the one commonly used. Besides, Lieutenant Joseph Baker, map maker for the explorer Vancouver, left not only a fine collection of maps for the archives of the British navy, but a personal record highly honored and illustrious as well. Baker first spied the mountain while off Dungeness in 1792, and reported its discovery to Vancouver, who thereupon complimented his subordinate with the present official name for the mountain. Joseph Baker, after long service in the navy, died in 1817, leaving nine children, one of whom rose to the rank of general and another to that of admiral. A son of the latter, also in the navy, in 1903 prepared, upon request, a biographical sketch of his grandfather, which is now on file in the Provincial Library at Victoria.

The writer, in the preparation of this article, has been surprised at the apparent dearth of material pertaining to the biography of E. T. Coleman, who has the undisputed honor of having made, in 1868, the first ascent of Mt. Baker by civilized man. This dearth is the more surprising from the fact that a person of his evident ability and energy cannot have been very obscure. It arises, no doubt, in part from his alienage, and in part from the lapse of years. Indeed, the libraries of the Pacific Northwest contain little except what is gleaned from his own wonderful narrative of the ascent, profusely illustrated with woodcuts from his own pencil sketches, which appeared in *Harper's Monthly* for November, 1868.

If anything were needed, in addition to his narrative, to establish his high literary ability, it will be found in his prize essay for the Literary Institute, Victoria, B. C., on "The Beauties of the Scenery as Surveyed from Beacon Hill," published in 1868, before his ascent of the mountain. This essay will be found in the University Library at Seattle. In this he incidentally draws a pen picture of Mt. Baker. The following excerpts are submitted to the judgment of the reader:

"Above all, it displays those towering masses, ever marked features of the earth, but pre-eminently conspicuous on this coast. These have their culminating point in Mt. Baker, one of the great peaks of the Pacific. Looking at this mountain, which stands up as a lonely sentinel of the silent land, with its hoary head far above the adjacent ridges, and its breast covered with the soft and shining snow, we are all the more interested, remembering that from that summit, now smooth and peaceful, have belched forth volcanic flames and burning stones,

and that beneath that breast of unsullied white lie the scoriae and lava thrown out from the earth by forces that may shake a continent. This fact has caused it to occupy the attention of those who have considered the causes of the shocks of earthquake which from time to time agitate the coast.

* * * * *

"But the culminating point of the view is unquestionably Mt. Baker, whose great peak, clad in pure white, rises in solitary majesty to a height estimated at between 12,000 and 13,000 feet. It is remarkable for its beauty of outline, and bears a considerable resemblance in this respect to the Jungfrau, the queen of the Bernese range of the Alps. It was observed by the third lieutenant of Vancouver, and received his name. However deserved the compliment, one cannot but wish he had possessed a name more euphonious. For, to those ignorant of its origin, it is apt to suggest a very common process of domestic life, in connection with one of nature's grandest objects. The great height of this mountain is rendered the more apparent from the circumstance of there being no other peaks in the immediate neighborhood to dwarf it, and also from the comparatively low height of the hills intervening between the spectator and its base. A group of pines in the foreground with their dark foliage also enhances the brilliant effect of the snow.

* * * * *

"At all times is this scenery grand and beautiful, whether seen in the early morning, when the rising sun tinges Mt. Baker with a tender rose color; at noon, when the snow-fields gleam like polished silver; or at eventide, when Mt. Baker glows like fire, and the western mountains are bathed in purple, while the glassy waters reflect tints of green and gold, changing into rose and lilac, till the sun sinks behind the hills and leaves the snowy peaks faintly defined on the sky, blanched and ghastly,—all color—all life fled."

There is no insipidity of embroidery in that! It is, to speak roughly, the genuine stuff, the finished product of letters, which those who gaze on mountain grandeur would never knowingly permit to perish.

A picture of this mountain, as viewed from near Victoria, the original of which was drawn by Coleman, stands at the caption of his account published in *Harper's*. From the top of the mountain to his viewpoint at Victoria the distance is about sixty or seventy miles. A climber at Camp Sprague, through a Bardeau "rifle range" telescope, has plainly descried the steamer "Princess Victoria" on her course from Victoria to Vancouver, with her passengers lining the rail, evidently looking up at the same mountain whose snow-fields were sketched by Coleman. The mountain stands forth in his picture with remarkable distinctness.

This, then, was his allurement through the five years of waiting mentioned in his account,—an inviting challenge until the success of his third attempt in 1868.

Of his first attempt in 1866, Coleman makes brief mention in his account of the final ascent. Aside from this mention, the only particulars the writer has been able to procure are the following,

contained in a clipping from the Portland *Oregonian* of August 9, 1866, furnished by the Oregon Historical Society. The *Oregonian* article refers to an item in a Victoria newspaper of August 2, 1866, quoting from it as follows:

"Dr. Brown and Mr. E. T. Coleman returned by the *Josie McNear*, having failed to accomplish their intention to ascend Mt. Baker. They inform us that they proceeded up the Skagget River, with Judge (Charles Ben) Darwin, of Washington Territory (Port Townsend), accompanied by Indians, a distance of about forty miles, when they reached the confluence of a stream called the White Stone, or Tukullum, River, which flows from the base of the mountain. It became necessary to procure guides, but the tribe of Indians who reside there, named the Koma, numbering some sixty strong, became apprehensive that the white men were making the attempt to set foot on their soil, and declined to let them proceed. Finding remonstrance useless, the party retraced their steps. The country in the vicinity of the mountain on that side appears to be very impracticable; on the Whatcom side, however, it is said that there is a practicable approach to the mountain by water, where the natives will offer no molestation."

His second attempt was also in 1866. He went in by way of the north fork of the Nooksak, with Messrs. Tennent and Bennett, residents of Whatcom County, as companions. His nearer approach to the mountain was evidently up Glacier Creek. Whether in the vicinity of Heliotrope Ridge he went directly upon Roosevelt Glacier, or veered to the west toward Grouse Ridge, for the higher elevation before taking the snow, is not disclosed. He and Bennett proceeded from the saddle between Colfax Peak and the main dome and were blocked by the ice cornice which girded the dome. They spent the night on the ice. Coleman, in his narrative in *Harper's*, states that they were compelled to forego further effort by reason of a lack of provisions. The following is from the *Daily British Colonist*, under date of September 6, 1866:

"Returned From Mt. Baker.—Mr. E. T. Coleman, one of the party who recently succeeded in nearly reaching the summit of Mt. Baker, returned yesterday in a canoe from Bellingham Bay. Mr. Coleman says that they attained a point about 50 feet from the highest pinnacle, which they found to be in the form of a dome. An attempt would have been made to reach the apex by a circuitous route, but provisions ran short, and some of the party were pressed for time; they therefore retraced their steps, though with the determination to renew the attempt next year if possible. The weather was favorable for the undertaking and it was not unpleasantly cold in the icy regions. The crater was passed about half a mile to the right, but they were unable from their position to inspect it. The sulphuric vapor emitted was, however, quite discernible to their olfactory senses."

In 1867 he was not successful in organizing a party. In 1868, going in by the middle fork, he attained the snow-line on Grouse Ridge at Camp Sprague, and afterwards intersected his trail of two years

From a water-color by E. T. Coleman.

The old Lummi village at the mouth of the Nooksak.

Northwest side of Mt. Baker, from Skyline Ridge.

Photograph by Banks and Wickersham, Bellingham.

before, somewhere in the saddle between Colfax Peak and the main dome.

Tennent stuck to the job, and was with him again on his trip in 1868, along with Stratton and Ogilvy. Together they sang the Doxology and planted the Stars and Stripes on the two peaks. Coleman is careful to mention this courtesy, together with the naming of the peaks: Grant and Sherman, Lincoln and Colfax. Especially when international estrangement incident to the Civil War was still rankling, how fortunate was this, his contribution of nomenclature, to that sense of fraternity which has since increasingly prevailed between the realm of his own patriotic devotion and the land of the stranger whose mountain on the Pacific had been a continual challenge!

The first news of his successful ascent was telegraphed by him to the *New York Herald* and other Eastern papers immediately upon his return. The following is from *The British Colonist* (then published at Victoria) of August 22, 1868:

"Mt. Baker.—Mr. Coleman started from the American side for Mt. Baker on the 7th inst. Mr. Thomas Stratton and Mr. Tennent have joined the party. Mr. Tennent was with Mr. Coleman on the previous ascent two years ago. Mr. Eldridge traveled thirty miles with them and then returned. This is probably the last news we shall have of the party before its return."

The same newspaper, on August 25, 1868, published a letter from Coleman, dated at Sehome, W. T., August 20, 1868, announcing his successful ascent.

The Intelligencer, of Seattle, on August 30, 1868, copied the above letter from the *Colonist*, together with other information obtained from David Ogilvy, who, it seems, had preceded Coleman on his return to Victoria. The article in the *Intelligencer* containing this additional information is as follows:

"The Ascent of Mt. Baker.—A letter to the *Colonist*, from Mr. Edward T. Coleman, under date of Sehome, W. T., August 20th, announces the pleasing fact of that gentleman's successful ascent of Mt. Baker. Mr. Coleman says: 'I take the earliest opportunity of sending you a few lines to say that the party which I had the honor of organizing has succeeded in reaching the summit of Mt. Baker, having been absent from this place fourteen days. The party consisted of Mr. Thomas Stratton, Inspector of Customs; Mr. John Tennant, of Whatcom County; Mr. David Ogilvy, of Victoria, and myself. Two peaks were discovered, as surmised by me, one being concealed by the other. as seen from the west. As there is scarcely any appreciable difference in their height, the Stars and Stripes were planted on both, and they were named after Generals Grant and Sherman, respectively. The volcano lies between the two; only a cursory view could be obtained of the crater, by reason of a projecting cornice running round the summit of the mountain, which rendered any attempt to gain a closer view highly dangerous. I estimate the height of the mountain to

be 11,400 feet, but it is possible that a more careful calculation and comparison of the aneroid barometer with a standard or mercurial one, may give a different result. The party made a collection of minerals and plants, and have, it is believed, discovered some species which will be found to be new to science. Mr. Stratton, whose knowledge of geology and long experience of gold mining in the mountain districts of California entitles his opinions to respect, noticed three extinct craters, specimens from which have been obtained. Mr. Stratton is of opinion that there are not any indications of gold, as the formation is of sandstone, commonly known as the coal measures.' "

From the same journal we learn a few more facts, derived from Mr. Ogilvy, who had returned to Victoria:

"The party left Whatcom on the 8th of August, traveled up the Lummi and Nootsac rivers by canoe eighty miles; then twenty miles through a desperate country, to what may be called the foot of the mountain. At the snow-line, where vegetation ceases, the Indians camped, allowing the explorers to reach the summit themselves, which they did the same day, and returned to camp in the evening. The distance traveled, which was about six miles, is said to have been most fatiguing, though not as perilous as was expected. Being obliged to return to the camp the same evening, the explorers had only about an hour on the summit; this short period they seem to have used diligently. The existence of a volcano is established beyond a doubt, the crater being about three hundred feet wide, and at least six hundred feet deep, from which puffs of sulphurous vapors are being emitted. This crater lies between the two high peaks of the mountain, where the summit forms a plateau quite bare and free from snow, which is a quarter of a mile wide and half a mile long. The eastern peak, called after General Sherman, is the higher of the two. The time spent on the summit was devoted to examining the crater, and planting the American flags, with so much of the usual honors as the party were enabled to give. The mountain, as most persons no doubt are aware, is a few miles south of the boundary line, the forty-ninth parallel. The most arduous part of the ascent was at the last pitch, where the party had to cut four hundred steps in the ice in order to reach the top. The Indians would not go any higher than the line of vegetation; but they received the party on returning from the summit with marked demonstrations of welcome and joy, evidently recognizing the dangers and hardships of this part of the trip, and the courage and skill the explorers had shown in overcoming them so speedily. No signs of game were seen on the mountain, except the huge footprints of a bear, which the natives said was an old grizzly ."

From the records now available to the writer, Coleman appears but once again in the mountain literature of the Pacific Coast. He was a member of the party led by Gen. Hazard Stevens on the ascent of Mt. Rainier in 1870, and we are entirely dependent upon the narrative of the leader for the part of Coleman in this expedition. It appears that in the afternoon on the first advance from base camp to temporary camp, on a route peculiarly precipitous, Coleman lagged behind from the start. He was heard at first hallooing below and calling upon the others to wait, but they halted not until near sundown, when the

Indian guide was sent down the hill to look for him. The Indian reported that he had seen him in the distance returning to the base camp. Subsequently, it appeared that he had in fact returned to the base camp and there awaited the return of those who had run away from him. Coleman probably well knew the first commandment in mountaineering, that climbers going together should keep together and help each other, except when actual peril prevent. He discovered, on the contrary, that he had entered a Marathon race.

The narrative written by the leader, who therein claimed the honor of the first ascent of Rainier, was published in the *Atlantic Monthly* of November, 1876, and is very properly copied by Edmond S. Meany in his record of explorations entitled "Rainier." Coleman probably never knew that in this account written by General Stevens he had been made an object of derision.

The contempt of Sluiskin, who went back down the hill for the "Cultus King George man," was perhaps excusable on the part of a savage; but it was contemptible on the part of the leader to insert it in his record of the expedition, and to do so with evident relish. Coleman must have had some strange reflections on his American cousins after his return to Victoria.

Fortunately for the memory of Coleman, it clearly appears that he acted the part of a gentleman on this Rainier expedition. In this same record, it is happily stated that upon the return of the party from the summit, "Mr. Coleman was found safe in camp and seemed too glad to see us to think of reproaching us for our summary abandonment"; and later it appears that the same gum-blanket in Coleman's outfit, carried on pack animals to the base camp, which General Stevens had with such abundant humor characterized as superfluous, was useful and hospitable enough to shelter the entire party through a three days' rainstorm on their return home.

The student who would require any further assurances of a total lack of fair play in this narrative by General Stevens, should read the account of the first ascent of Mt. Rainier by Lt. A. V. Kautz in 1857, as published in the *Overland Monthly*, for May, 1875, and copied in his compilation by Professor Meany, and then turn to the above-mentioned narrative by General Stevens and see the manner in which Stevens belittles the achievement of Kautz. Kautz, indeed, was a rival. Coleman was a companion, or was supposed to be one.

Save the mention of Coleman's placidity when the party returned from the summit, and the further admission of the usefulness of the blanket, there is not a single reference to him in the entire account of the ascent in 1870 which is not disfigured by a spirit of uncharit-

ableness foreign to the literature of the mountains,—a spirit which could only have been imbibed from the atmosphere of jealousy so often surrounding the army officer.

This much as to Coleman's relation to the expedition on Rainier the present writer could not sidestep. He may possibly be pardoned for the further incidental observation that in the long perspective, the impartial student is likely to make some readjustments. For the ascent of a mountain is not to be defined with any nicety of technicality. Lieutenant Kautz in 1857, according to his account, which seems to be unimpeached, reached the crest, and went on and gained the top, where it was comparatively level, "although there were points higher up yet." He describes the ridge, with its depressions and three small peaks. All that the strictest technicality could further impose was for him to go on alone at six o'clock at night, further explore the ridge, and plant both feet and perhaps a flag and a brass plate with his name inscribed, on at least one of the small peaks on the ridge.

The foregoing glimpses of the personality of the subject of this review, confined as they are to his adventures on Baker and Rainier, are but little increased by any direct references to himself in his narrative of his ascent of Mt. Baker published in *Harper's*, although by reading between the lines much is imparted as to his characteristics.

He was familiar with the Alps, and was prompted to leave "the beaten paths of the European ice-fields" for the greater allurement of those on the coast of the Pacific Northwest. It appears that he had not climbed to any extent for some twelve years prior to 1868. In the foot-note of the printer, subjoined to his article, it is stated that the author had published a volume, "Scenes from the Snow Fields," from the press of Longman & Company, London, in 1858. Later in the text, in giving expression to his sense of relief and exultation on his trip down from the mountain, he states, "I had left Victoria jaded and depressed, sick of the monotonous round of my ordinary occupation." Information recently received from Victoria shows that in 1868 he was Librarian of the Mechanics' Institute in that city, and further that he was a member of the Alpine Club of England, and that he came to a sad, tragic death on the streets of London (date not given).

A letter from John W. Tolmie (Victoria), of date September 25, 1920, states that he remembers Coleman as an artist in water colors, and as a climber of Mt. Baker; and that he has some printed record to the effect that Coleman came to Victoria September 16, 1862, after a trip of ninety-nine days on the *SS. Tynemouth*, which was the first passenger vessel from England to Victoria via Cape Horn.

He likewise gives the names of some of the passengers on that voyage who are still living at Victoria.

The following particulars are from Hugh Eldridge, now one of the most widely known and highly respected citizens of Whatcom County. He is a son of Hon. Edward Eldridge, at whose home, on the old donation claim adjoining Bellingham, Mr. Coleman was entertained.

"I was only a small boy in those days, but I remember Mr. Coleman as one of our distinguished visitors. Father was a man of great hospitality, and enjoyed meeting strangers. Coleman was at our home when he first went up the Nooksak with John Bennett, and also when he went again and made the top in 1868. On one of these occasions, after returning from the mountain, he remained at our house and painted pictures for, I think, as long as two or three weeks. He had father get him some drawing paper and cardboard at Olympia.

"He was a rather tall, slender man. I think he had a fair complexion, with light hair and probably blue eyes. He was English ,very polite and entertaining, and with polished, gentle manners; quite a winning sort of man, and with what you would call esthetic tastes.

"I remember hearing my father talk about him—that he had been wealthy, but had gone through with it all. He was in rather straitened circumstances. This picture that you have, which you say he painted, is the picture of the village, back in those days, over on the Reservation, near the present church. The river afterwards changed its channel and the townsite of Marietta was then located on the present channel. The old village was called Lummi. It is likely he gave the picture to Finkbonner as a sort of compliment to the Indians for the help of their headmen in getting him canoemen for his trips.

"This man Bennett, whom Coleman speaks about in his story, went up the river the first time. It was John Bennett, the old nurseryman, who had a garden tract right near us here. He was a Glasgow Scotchman, and was more of a botanist than mountain climber. I remember hearing him tell how the Indians would jump the logs that lay close to the water, coming down the river. The white men would duck by lying down in the canoe, but the Indians would jump over and alight in the boat below. He used to tell, too, about the night they spent on the ice, pretty close to the top. A wall of ice blocked the way, the time Bennett was along.

"Tennent, who went up with Coleman the last time, had a ranch somewhere around Ferndale. I learned also, in some way, that after Coleman got his story written about his ascent, he went over to Port Townsend and read it at some entertainment. Stratton, another of his companions on the trip, was a customs officer there. He naturally would help get out an audience to hear the story and see the pictures.

"Locally, around here, it was considered quite an achievement to get to the top of Baker. You see, there were no trails beyond the Forks. Coleman painted a picture of the mountain there at our home, but I don't know what he did with it."

Now that we must sum up and head out to a conclusion, it will be necessary for the reader, in order to understand my estimate of Coleman, to review first the story of his ascent in *Harper's*, so that we may cast our reckoning from the same accumulation of data.

To epitomize briefly: Coleman was a man of much experience on the mountains and had great patience and courage. He was genial and kind to his companions and subordinates. He was remarkably versatile and possessed high attainments in general scholarship—the sciences and belles-lettres. There was something in his social qualities which gave him intimate companionship with the intellectual and cultured class. His rank as a landscape painter is not disclosed, except that his pictures, in the account of his ascent of Baker, and this water color of the old Lummi village at the mouth of the Nooksak, where he entered the river for his final trip, indicate considerable ability. Local photographers in recent years have gone to the same viewpoints on the mountain, where he caught the outlines for his illustrations, and their photographs prove that he was remarkably accurate in proportions and outlines.

It also plainly appears that he was a man of sensitive artistic temperament, whose moods ranged all the way from the gloom which at times enveloped him to the high ecstasy of triumph,—all the way from torturing doubt to the highest and most serene assurances of faith. Whether by day, on the tug of the climb, or lying awake at night while his companions slept, listening to the roar of the river which seemed to him as relentless and tragic as the glaciers which gave it birth, he was possessed throughout with the delicate responsiveness of the poet, to whom nature ever appeals with unusual impressiveness and suggestiveness.

You may call him an "idealist"; but you must first cleanse the word from any disparagement implied by the many who do not yet understand. For on the mountain top he found that divine inspiration which had called him long.

And so, in the fairy realms of happy dreams, when the gala-days of "make-believe" shall welcome to those royal courts at Mazama Park all the climbers of Mt. Baker, trailing in from all the years, and they shall proceed to choose the king of the festival, we may be sure that a crown of heather-bloom will be placed upon the brow of Coleman. The mountain, too, no doubt, will hail the coronation with acclaim, for this nature-lover, wandering far from the famous peaks of Europe, was the first who truly wooed and won; while the votive tribute of his heart's devotion on many a glowing page can never be excelled.

(NOTE.—The writer must be pardoned here for the mention of those whose great kindness helped him along this trail: Charles F. Easton, Historian Mt. Baker Club, Bellingham; Edmond S. Meany, University of Washington, Seattle; George H. Himes, Oregon Historical Society; Jamieson Parker, Mazama, Portland; J. Forsyth, Librarian Provincial Library, Victoria; John W. Tolmie, Victoria; Katherine M. Ryan, Librarian, Hugh Eldridge, and R. W. Green, all of Bellingham.—A. J. C.)

The Story *of* Mount Baker

By CHARLES F. EASTON

Mining Engineer, Member American Association of Engineers.

The birth of Mt. Baker was not so very far back in the dim vista of geological time. It is of recent origin, as compared with Mt. Shasta, Mt. Hood, Mt. Adams, Mt. St. Helens, Glacier Peak, and their big brother, Mt. Rainier. It is the youngest member of the family, but has now grown hoary-headed, having long since passed its majority. Mt. Lassen is a half-brother. Their volcanic history is essentially the same, and, if told to you by the individuals of the group, their accounts might vary somewhat, but not more, perhaps, than the story of any one incident related by as many different people. Here is the story of Koma Kulshan, as Mt. Baker was called by the Indians.

There should first be given some basic statements. This is essential for a starting point, but it is not important to go back over the whole scheme of general geology.

During much of the earth's early history, the region now known as the Cascade Mountains was under water. When it emerged, towards the end of the Carboniferous Age, there followed changes in contour and elevation. There were extremes of degeneration and disintegration throughout the Triassic and Jurassic periods, the whole region undergoing countless metamorphic changes, both above and below the water.

The catastrophic epoch which marked the beginning of the Cretaceous Period literally swamped much of the Pacific interior continental region, and what is now Washington and Oregon, and much of the adjacent area, was largely submerged, to remain under water for the duration of the new age, forming limestone, sandstone, conglomerate, slate and other deposits of great thickness.

The close of the Cretaceous and beginning of the Tertiary Age was brought about by another of those world-wide epochs of rapid alterations in geography and destruction and extinction of many species of organic life. It was during the early part of this Tertiary Age, and not in the early Carboniferous Period, that the coal measures of Washington were formed. What is now the land surface was then somewhere about water level over a large tract of flat country along the coast line, having swamps and lakes and inland seas supporting a sub-tropical plant life of great luxuriance.

Then followed periodic depressions and characteristic deposits of both fresh and salt water origin. The three distinct periods of the

Tertiary Age (Eocene, Miocene, and Pliocene) are considered the principal mountain-building eras, and about completed the mountain systems of the world. But, generally, throughout our Pacific Coast region the rock surfaces were deeply submerged.

But these alterations were abruptly brought to a close by some mysterious force which broke up much of the surface of the globe, both above and below water, into great blocks, tilted and turned and up-ended, sinking in places and rising in others, forming valleys, canyons, gorges and jagged mountain peaks, leaving broad plains and shifting the beds of oceans, besides bringing about widespread destruction of most of the then existing species of land animals and plants, and much of the marine life as well.

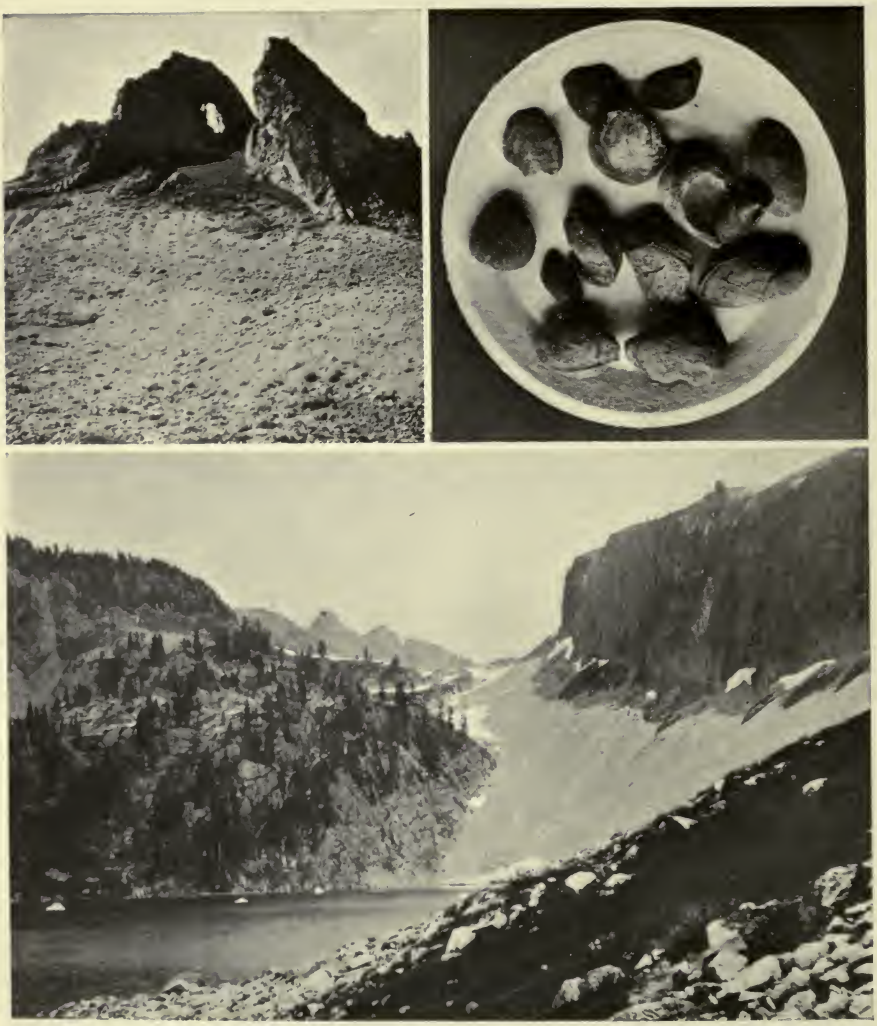
It is impossible as yet for science to explain just what it was that happened to Mother Earth at this time. It was a most decided epoch in the world's life, at any rate. The great fossil palm leaves, three to five feet across, found in the Chuckanut sandstone, tell us that the climate was radically changed, and the frozen mastodons of the north-land, with the flesh still upon their bones, along with other similar proofs, testify unmistakably that this world-wide cataclysm, in its initial stage at least, was instantaneous, even to the shifting of the axis and rotation and perhaps the magnetic polarity of the globe.

It is not improbable at all that there may have occurred at this particular time a change in the volume of the earth's substance by instantaneous augmentation from ethereal sources. This epoch, at the close of the Pliocene Period, is regarded as the last of the great crises in the growth and development of our planet. There was no Koma Kulshan at that time.

It required a long, long time for the ruptured surface of the earth to heal. The process continued throughout the first part of the Quaternary Age, known as the Glacial Period, which finished out the already universal destruction, by extinction of more of the remaining characteristic species of plant and animal life of the world. Edges of the broken upturned rocks, by revealing fossil plants and animals, tell us even now, as plainly as words in print, the formation and age to which they belong. There are granite, schist, and marble deposits showing in bluffs, ridges and mountain sides, some of them with every evidence of exposure to intense heat. Other rocks show plainly their lines and layers of stratification. Hills and mountains are of slate and sandstone (originally beds of clay and sand), with occasional veins of coal. The region we are considering is one continuous ruptured highland, the huge blocks tilted and crowded together like ice-jams. The valleys and canyons are not the result of erosion, but stand today in about the

Photograph by F. H. Kiser, 1909.

Deming Glacier, on the southwest side of Mt. Baker



Upper left—The Bivalve, a pair of ledges of Tertiary formation at the fusion line on Chowder Ridge. Upper right—Miocene fossil clams and oysters, from Chowder Ridge. (*Photograph by Engberg, Bellingham*). Lower—West side of pass between Camp Sammons and Galena Lakes, showing a part of Hermann Mountain on the left, composed of old metamorphic rocks, and on the right the volcanic plug of basalt which forms Table Mountain. (*Photograph by C. F. Easton*).

shape and condition in which they were left at the close of the Glacial Period.

Now draw a mind picture of the landscape of the Mt. Baker country as it was just before the mountain existed. Bear in mind, though, as just stated, that since that day there has been very little change apart from the mountain itself; some erosion, of course, rounding off the sharp angular corners and sloping down the sides and edges with detritus, likewise a little glacial wash, and beds and fragments of drift in the lower altitudes; but that is about all, aside from some "ups and downs" in the way of shifting shore lines, the last "up" being an elevation of a few hundred feet, more or less, as shown by debris which includes erratic rocks transported and scattered about by melting icebergs.

The distinguishing features of the picture would be Mt. Shuksan and the Twin Sisters, both somewhat rudimentary then, because these two mountains underwent changes later, while Mt. Baker was forming. But Church Mountain and other high peaks northward and eastward, including Ruby Mountain, were the same then as now. Their veins and ledges of gold, silver, copper, nickel, lead and platinum were all formed during the Tertiary Age and earlier in earth faults, at depth, before the last breaking up of the surface referred to. Baker River and the branches of the Nooksak should be pictured as in their present beds, with no changes except minor tributary sources. The Skagit country should be left undisturbed, but Mt. Baker would not be in the picture. We have thus a mental vision of the birthplace of Koma Kulshan.

The prolonged duration of the Glacial Period, with its low temperatures and icy blasts, a turbulent reconstruction era, cooled the surface of the earth, stiffening and hardening it to greater depths than ever before, and left the outer shell or crust (if there be, in fact, a crust) rigid and less subject to undulations, flexures and foldings, but reinforced by immense valleys and plains of earth and gravel. The sub-tropical climate, followed by arctic extremes which left parts of the earth destitute, gradually equalized, and thus came our present temperate climatic conditions.

Since that time the physical changes have been characterized by volcanic action—the radiation of internal heat, greatest at points of least resistance, causing expansion, fusion, rupture, and ejection of material, either in broad fields of thin liquid lava, like the plains of middle Washington, southern Idaho, and parts of Utah and Nevada, or by infiltration of fissures, or in the mounds and cones of thick plastic outflows. Not all volcanoes belong to this recent period, but so many

of them do that the age of man might appropriately be styled the Volcanic Age.

The five volcanoes of the State of Washington—Mt. Baker, Glacier Peak, Mt. Rainier, Mt. Adams and Mt. St. Helens—are sometimes referred to as isolated volcanic peaks, which is true in a sense; but they coincide in a general way with a continuous row of heat-vents along the Andes, Sierra Madre, Sierra Nevada, Cascade Mountains, Aleutian Islands, Kamchatka, Japan, the Philippines, New Hebrides, New Zealand and the Antarctic continent, almost encircling the great Pacific Ocean. All of the small islands of the Pacific were formed by volcanoes.

Go with me to the foot-hills of Mt. Baker. Skirt the slopes of this gigantic cone between the trees and the snow-line. There is Grouse Ridge, leading to the mountain from the west; Skyline Divide from the north; Shuksan Ridge coming in from the east, and Sister Divide and South Fork Watershed from the south.

All these and the intermediate ridges and divides had their inner ends melted off. The contact line of these stratified and metamorphic rocks with the fire-rocks is very noticeable. The fusion line circumscribing the mountain is an irregular oval, about eight miles by ten miles in extreme width and length, and there are but few places where lava flows have ever crossed this line in later times.

As already stated, the formation of Mt. Baker was post-glacial. The increasing temperature at this point, and the bulging of the surface, resulted in a rough, rounded knob. The heat at the center was much greater than around the edges. Continual increase in temperature produced a yielding of the now plastic mass, and the outer edges, just within the fusion line, were lifted by pressure, while the center settled, seeking its level with the more viscous mass.

On the northwest slope of Mt. Baker there was an enormous bench of porphyritic rock, 1,000 to 2,000 feet high, within the fusion line, circling from Grouse Ridge along the timber-line, then cutting past Camp Heliotrope across the lower part of Roosevelt Glacier to Bastile Ridge. It is not a bench made up of layers of lava, as might be supposed, but a homogeneous mass in structure. Next, a continuation of this mountain-like bench of basalt, toward the east, is cut through and ground down at the crossing of Mazama Glacier, but extends to Lasiocarpa Ridge, bending south along the cleaver separating Mazama and Sholes glaciers to Camp Kiser. From this point it completes the circuit of the mountain, crossing Park Glacier along Park Cliffs—the glacial Niagara where bergs drop over another thousand feet for a distance of two miles or more; then, on along timber-line

again at the foot of Boulder and Easton glaciers, past Cathedral Crag and Camp Gorman, forming the base of the mountain on the southwest side at the foot of the Black Buttes, to Grouse Ridge, the point of starting.

One evidence that the Tertiary formation about the base of Baker, outside of the fusion line, was in place before the volcano was formed, is a lignitic coal vein on Lookout Mountain, known as the Anthracite Coal Mine. This coal was unquestionably formed during the Eocene, or first, period, of the Tertiary Age. It is lignitic, so far as age is concerned; still, it is anthracite. There were no deposits of coal of any kind in the Puget Sound region during the Carboniferous Age, when true anthracites had their origin, yet our coal is shown by analysis to be anthracite.

It came about in this manner. The coal seam was broken off and up-ended, standing almost vertical, at the close of the Tertiary Period. Afterwards, during the fusion or initial stage of the development of Mt. Baker, the heat was so intense in the adjoining region that the hydrocarbon, or gaseous part of the coal, was dispelled, leaving only the fixed carbon and ash. The writer made the first analysis of this coal when it was discovered and identified it as anthracite, inasmuch as it contains 88 per cent of fixed carbon.

There is another evidence of the condition of these rocks at the time when the volcanic action began. At the point where Skyline Ridge is melted off at its abutment against Mt. Baker, Miocene fossil clams and oysters are exposed at an elevation of 6,000 feet—not upheaved by the formation of the mountain, but merely dissolved off. This exposure has been named Chowder Ridge, and a pair of rock ledges of peculiar shape, shown in a cut herewith, has been called the Bivalve. This name had its origin in the following incident. A party of "skyliners" camped on the ridge had in their possession a number of the curious fossil clams. Dinner was being prepared, and there was a pot of ptarmigan boiling over the camp-fire. They were perfectly aware that *lagopus albus* stew was not in season, but had no idea that the timber-line was ever visited by any game warden. When the contents of the pot were just ready to serve, in came a forest ranger, ex-officio a game warden, and made himself welcome. He was asked to dine with them and accepted the invitation. The cook saved the situation by tilting the lid of the pot and adroitly throwing in a handful of petrified clams. They were good specimens of fossil *crepidula* and appeared to be perfectly fresh and good. The ranger was served with clam chowder, and was free to say that it was "skookum." If he realized that it had a ptarmigan flavor, he was considerate enough

not to embarrass his hosts about it. Hence the name Chowder Ridge.

There are other places along the fusion line about the foot of Mt. Baker where the rocks tell of pre-volcanic conditions. One chalk bed, lying under hundreds of feet of argillaceous material, can tell all about rhizopods and something about mollusks and fishes of the Cretaceous Period. It is 4,500 feet higher than where it was originally formed, and the overlying rocks are familiar with Tertiary plant life and contain some excellent exhibits of pressed leaves and stems like willow and alder, which do not date farther back than the epoch preceding this formation.

The flattened dome, from its settling, was a very uneven plateau. It sank in places with the spreading and bulging up of the borders, leaving knobs and ridges over the surface, because of a higher state of fusion in some places than in others. This is accounted for by the nature of the different kinds of sedimentary rock being smelted. Sandstone, slate, limestone, concrete, granite, schist, quartz, etc., fluxed from below by the superheated fluid rock rising from great depths, fused more or less readily and completely.

With increasing heat and some movement at the center of the field came partial cooling at the edges. Again the dynamic forces pushed the central area still higher, with intermittent lifts and falls, until its restricted borders became a vast field of picturesque knobs and pinnacles. Up to this stage there were few if any eruptions. Some of these points have since been whittled away by glacial action; others, towards the center, covered by the lava flows and buried from view; while remnants of still others are beetling into atmospheric space in the most unique and fantastic fashion. Let Coleman Peak, Epley Portal, Hadley Peak, Crag View and many similar but less conspicuous minarets bear witness to these changes. The unevenness of a few of the great cleavers—those which happen not to be formed of lava layers—point to the same cause.

The increased area of radiating surface gradually chilled the formation and brought the elevation by uplift to a close, with two exceptions to be mentioned later. Then, when expansion and internal heat failed to produce additional lift, the pent-up forces burst the shell at the center and ejected molten rock in jets and fountains. These eruptions have followed one another periodically for countless centuries. The first and most important opening from which lava flowed is now called Summit Crater. From this vent has come most of the material with which the main peak of Mt. Baker has been built.

The abrupt northern slope has avalanched its overlying ice capping of 150 feet in thickness and thus exposed to view the true nature and

composition of the cone. Layers of congealed lava slope down the steep side, some of them fifty feet thick, some only three or four feet, the longest having traveled about three miles, others only a short distance, lapping and overlapping. Had they not been of viscous material, the overflows would have gone sweeping down the steep mountain sides out into the canyons and valleys.

Summit Crater has never been closed, but has suffered constriction to such an extent that new vents have been forced through the side walls and at the base of the mountain. Mazama Crater on the northeast slope, 1,500 feet below the summit, is one of this class. Because of the immense fields of ice surrounding it, it is impossible to determine whether this crater ever ejected much thick, waxy lava; but it certainly did throw out vast amounts of light, porous, froth-like matter, in appearance as if it had been agitated until it became foam. Pumice-stone Pinnacle, still standing as a part of the upper wall, is all that is left of it today, except a large hot spot on the side of the peak, steaming and smoking.

There are three extinct craters. We will first consider Thunder Crater, now known as Thunder Glacier. It lies on the opposite side of the main peak from Mazama Crater. At one time fluid lava boiled in this cauldron and ran out over the west rim like water, in very thin sheets. This all happened long after Summit Crater had slackened in its eruptions. But finally even Thunder Crater froze up. There was another lapse of inactivity; then there happened a spectacle of the ages. The bottom of the pit, about two miles across, had hardened to great depth, and when there was another eruption, it pushed the core of the pit upward as a monstrous plug about a thousand feet, then another thousand feet, and still another thousand feet, leaving it standing on the side of the mountain as the Black Buttes (Colfax, Lincoln and Seward peaks), three thousand feet above the crater bed, which it bottled up securely.

The Black Buttes are among the most wonderful sights on the face of the globe; a solid, homogeneous mass of black basalt, dense, firm and somewhat vitreous, minaretted at the summit from blistering and cleaving in the extremes of heat and cold, oval in diameter, with a cross section of about two square miles, and rivaling the main summit of Mt. Baker in stupendous grandeur. Arranged in a row, twelve thousand of them would stretch around the globe, making a sort of Chinese wall over half a mile in height and three-quarters of a mile thick.

On the opposite side, towards Mt. Shuksan, is Table Mountain, one corner of which is Mazama Dome, at Camp Sholes. This is another

volcanic plug, forced up bodily, cutting Sholes Crater (Sholes Glacier) into Sholes and Bagley craters, and probably closing the era of volcanic activity in this region also. The erosion from this plug is not extensive but progressive. A novel feature is the cleavage from its sides accumulating at the base and forming a bare rock slide, in places lapping out over the slopes of adjoining older formation and covering rocks, trees and other vegetation.

This eruptive area is comparatively new. Unlike the other craters, the lava flows here are outside of the bench or initial formation of the mountain proper. With the cooling of the summit by snow and ice, the vent clotures there forced fresh openings, the weakest spot now being along the ridge leading from Mt. Baker to Mt. Shuksan. The lava flows along here were mainly to the south and southeast, on the Swift Creek side, with their sources exactly where Table Mountain stands today.

Now listen to a lithologic story of something that happened near Austin Pass. The scene is the little alpine valley where the Mazamas established Camp Sammons. When you think of a valley, you naturally associate with it the idea of one drainage channel; and, back in the days of the cave-man, this valley had but one stream to carry away its surface waters. There was no cave-man in this part of the world to inhabit it, however, but nature prepared it by scrubbing it out with her glacial cleaner. The bed of the valley, like the sides of it, was composed of blocks and fragments of metamorphic slate, angular and of all sizes, embedded in a binding cement of porphyry. This was smoothed off and polished down into a beautiful mosaic, as if for decoration. It was later planted with ferns and flowers and the landscape garnished with clumps of evergreens. Deer and goats and carnivora came in, to await the immigration of men and women of the Stone Age.

Then an alteration was effected. A river of lava was poured into our little valley. Flood after flood of real lava was let loose—stiff, waxy stuff—cooling faster along the edges and crowning up along the center, until the floor of the valley was fairly level for a couple of miles. The one stream of water was thus divided into two separate channels, half of it flowing as Bagley Creek along the foot of Hermann Mountain to the west, and the other half as Anderson Creek (the stream which furnished water for the Mazamas) on the east. The new floor was tiled over in honeycomb fashion with hexagonal basaltic columns, crystallized, set vertical, and surfaced off in the cooling. The shallow soil over this bed of basalt, leaving it exposed in places, is proof of its recent origin. It is dotted over with fifteen lakelets and

parked in a most interesting way for a camping place. Man finally came. There were visits, of course, by the aborigines in their search for game; then came the white prospector, surveyor and hunter; now the Forest Service of the Department of Agriculture has in contemplation a road to open this alpine valley as a scenic resort.

Summit Crater is yet alive, with fumaroles emitting gas and vapor. Since the closing of the lava stage of eruption, this crater has been emitting fumes and periodically discharging cement-like mud and ashes, repeatedly building and rebuilding the south and east rims out of anhydrous ash and cinder mixed with much condensed sulphur. The mud flows of dehydrated cinder saturated with steam and surface water and mixed with angular fragments of rock picked up in sluicing down the sides of the mountain, went to form beds of breccia, or natural concrete. Examples of this formation are to be found in the park region between Deming and Easton glaciers, at Meadow Point and above Camp Gorman.

The most recent developments have been dry eruptions accompanied by rising temperatures sufficient only to hurry the movement of the glaciers. Advance and recession of the terminals are results of these alterations of temperature. I give just one example as proof of this, though there are others. From a moraine 150 feet or thereabouts above the present bed at the foot of Roosevelt Glacier, it will be noticed that on the sloping canyon wall, the trees on the upper side, above the moraine of boulders, are of all sizes of maturity, with dead and down timber among them, but that on the lower side all was stripped away and there is only a new growth of small trees, of which the oldest are probably not more than ninety or one hundred years old, or perhaps younger.

The growth of Mt. Baker has been progressive. It is now essentially complete. There is no likelihood of further volcanic activity beyond intermittent discharges of ash and other light material.

The First Ascent *of* Mount Shasta

A Correction

By ALLEN H. BENT

The mountaineer, naturally aspiring, looks continually forward, and so is perhaps not generally interested in retrospective study of the early climbers. However, in my account of Mt. Shasta in the 1917 number of *Mazama** there is an error that ought to be corrected. Writing history three thousand miles away has some disadvantages, and Shasta is too great and interesting a mountain to be in any way misrepresented.

In Hutchins' "Scenes of Wonder and Curiosity in California," from which I quoted, the name of the first climber and the date are both evidently wrong, though the trouble is not entirely with Hutchins.

John McKee, of San Francisco, in an article in *Ballou's Monthly Magazine*, Boston, October, 1868, says the first ascent was made in August, 1854, by Capt. E. D. Pierce, superintendent of the Yreka Water Power Company's saw mills, and that he (McKee) was with a party that Pierce led on a second ascent a few days later. "A History of Siskiyou County," published in Oakland, Cal., in 1881, gives the name as Capt. J. D. Pierce in its account of the ascent, and in the index and elsewhere as John B. Pierce. The first ascent, according to this authority, was early in September, 1854. The day after the second ascent, six others who had started with the party, but had lost their horses on the way to the foot of the mountain, succeeded in reaching the top. McKee further says that five women and ten men made an ascent with Pierce in September, 1856.

*"Mt. Shasta in History and Legend," by Allen H. Bent, *Mazama*, 1917.

The spirit of the hills is action, that of the lowlands repose; and between these there is to be found every variety of motion and of rest, from the inactive plain, sleeping like the firmament, with cities for stars, to the fiery peaks, which with heaving bosoms and exulting limbs, with the clouds drifting like hair from their bright foreheads, lift up their Titan heads to Heaven, saying, "I live for ever."

—*Ruskin.*

The Alpine Club *of* Canada *at* Mount Assiniboine

By W. E. Stone

The fifteenth annual camp of the Canadian alpine club was held in 1920 at the foot of Mt. Assiniboine during the latter part of July and early August. The location, together with the fact that it was the Welcome Home camp to members who had participated in the war, brought together an unusual number of mountaineers from all parts of America and England.

Mt. Assiniboine, situated thirty miles south of Banff, is the most notable height in southern Canada, visible for a long distance in all directions from high altitudes. The massif, with five radiating spurs, covers an area of thirty square miles. Its sharp, pyramid-shaped peak, rising 2,000 feet above all of its surroundings to an altitude of 11,870 feet, rates among the most difficult ascents in the Canadian Rockies or Selkirks, and on this account, as well as its inaccessibility, has been climbed but few times. It was first described by Walter D. Wilcox, who visited the region in 1895, and made a complete circuit of the mountain. The first ascent was made by Sir James Outram in 1901, with the assistance of two Swiss guides. Since then its summit has seldom been attained and it is safe to say that attempts to make the ascent have more often failed than succeeded.

It is a three days' journey by pack train from Banff to the foot of the mountain, necessitating two relay camps on the trail, and the task of transporting camp equipment, supplies and baggage over this long and rough route is no slight undertaking, even under favorable conditions.

The excessive snowfall of last winter, combined with the late spring, left the passes and uplands choked with snow up to the very day announced for the opening of the camp, and it was not until about a week later that it was possible to send the first pack train through. This delay was, however, more than compensated for by the perfect weather enjoyed during the duration of the camp. Ordinarily, the region about Mt. Assiniboine is subject to severe storms and bad weather, so that the visitors this year were unusually fortunate.

Leaving Banff, there was a short launch ride up the Bow River to Mt. Edith Landing, from which point the distance to the first relay camp was eleven miles. The first night was spent at Sunshine Camp, at an altitude of about 7,500 feet. From here to the next camp, in Golden

Valley, the trail led over wide uplands, crossing the great divide several times and descending at last into the Simpson River Valley for the second night, at Golden Valley Camp. The third day's trip followed the Valley of the Rocks, a wild, desolate region with evidences of some ancient upheaval which had apparently shaken down the wreckage of a mountain range into the valley. Finally, one emerged from this unattractive region to the ridge overlooking Lake Og, where the great Assiniboine Range came into plain view. Five miles further, through a lovely green valley, brought one to the white tents of the permanent camp, near the north end of Lake Magog, lying in the lap of a group of magnificent mountains, ranging from 9,000 feet upward to the culminating peak of Assiniboine.

The duration of the official camp was about two weeks, although several members and visitors remained in the vicinity for some days longer. It is expected that in the future a series of permanent camps will be maintained along the trail and at Mt. Assiniboine for the benefit of tourists; and this arrangement will undoubtedly be a popular one, since the whole trip to the Assiniboine group and the region thereabout is one of the greatest interest.

The camp attendance included some of the best mountaineers of the Alpine Club of Canada, including Major E. O. Wheeler, of the British army, home on leave; Mr. A. H. McCarthy, of New York; Colonel W. W. Foster, of Vancouver, and others. These amateurs were wholly competent to conduct daily parties of the more experienced climbers on all of the climbs within range of the camp, while the less expert members were taken in charge by two Swiss guides, Ernst Feuz and Rudolph Aemmer. There were a dozen or more first-class rock or snow climbs to be reached from the club camp as a base. These included several virgin peaks: Mt. Sturdee, 10,000 feet; the Marshall, 10,466 feet; and Mt. Magog, 10,050 feet. The latter was used as the graduating climb for novices, offering a fine combination of rock and snow and difficult enough to test out the nerve and strength of the graduates.

Mt. Assiniboine itself was in excellent condition for climbing, being wholly free of snow and ice, which made it possible to ascend by the steep north arete, a route seldom used; for, with the usual snow conditions, it is necessary to traverse across under the north face and climb by the southwestern arete, a route which is very long and exhausting. Previous ascents have, with one or two exceptions, always been made by this latter route and with expert Swiss guides, but the club amateurs found no difficulty on the north arete, by which all of the ascents were made this season.

The writer's party, led by Mr. McCarthy and including Mrs. Stone, left camp at 3:30 a. m. on July 30, and after an hour's walk along the north shore of Lake Magog reached the foot of the cliffs rising about a thousand feet to the great glacier field at the base of Assiniboine peak. This was the initial step in the ascent and in itself a good climb. The route had been followed so infrequently that loose stones abounded. A rope was necessary from the very beginning and in a few difficult passages was something more than a mere appendage for "moral effect." At one point the route passed under a lively waterfall from which every one of the party received his ducking philosophically. Having surmounted this cliff, we found ourselves on a comparatively level snow-covered glacier across which it was an easy task to reach the base of the main peak soon after six o'clock. About this time an ominously brilliant sunrise threatened bad weather, according to all the conventional signs, but, in fact, preceded an unusually clear day.

Looking up the steep gray rocks of the north arete, the task of reaching the far summit seemed formidable indeed; but a mountaineer finds comfort in the truth that the ascent requires only one step at a time, and the persistent application of this fact carried us steadily up the arete until we reached a broad, horizontal band of red rock, where a steep chimney for about fifty feet called for real climbing.. Above this point we kept closely to the very edge of the arete. On our right were the smooth, steep slopes of the western face of the pyramid; to the left, one of the most awful precipices I have ever beheld, falling sheer from the crest of the mountain for a distance of perhaps 2,000 feet. Holding strictly to this course, we made good progress without especial difficulty, arriving at the north end of the summit crest at 9:45, six hours from camp. It was the record time for the ascent.

The summit of the mountain is a ridge of several hundred feet in length, extending generally from northeast to southwest and covered with snow, which is heavily corniced on the eastern side. The fresh wind at this altitude effectually discouraged us from loitering, and we hurried along the ridge to its extremities, surveying the wonderful view towards all points of the compass.

Far to the west, the great peaks of the Purcell Range, which we had explored in 1915 and 1916, were plainly discernible. To the immediate north were the well-known monarchs of the Canadian Rockies, while to the south stretched an unknown unexplored wilderness of great peaks. The immediate region is notable for the number of beautiful lakes, of which a score or more were to be seen glistening in

the sunlight. Off to the south an incipient forest fire was belching forth clouds of smoke, the forerunner of what in a few days was to become a general condition throughout the mountains, interfering greatly with photography. We spent less than an hour on the crest and then took refuge in the lee of some rocks for lunch and rest. While we were here, a large section of the cornice overhanging the eastern precipice broke away, and for five minutes there ensued a terrifying episode of noise and destruction. The descent required quite as much care as the ascent, on account of steepness and loose rocks, but our party went very steadily down without delay or mishap, arriving at the head of the cataract about half-past two, and in less than an hour we had repeated our baptism and reached the foot of the cliffs. Here we were surprised to encounter a motion picture operator, who had arrived at camp that day and, hearing of our ascent, had hastened to secure pictures of the first American woman to reach the summit of Assiniboine.

Altogether, during the camp, upwards of twenty-five persons reached the summit of the great peak and a much larger number graduated from Mt. Magog and other surrounding peaks. From a mountaineering standpoint, the camp was a great success.

In addition to the Canadian members, a considerable number came from New York, with scattering members from other parts of the United States; and the English Alpine Club was well represented. There were, as usual, camp-fire programs of great interest. All agreed that the region was one of the most interesting and attractive in which the club had ever camped. When it is made more accessible, it will be much visited, not only by mountaineers but also by those who enjoy mountain scenery but have no ambition to climb.

The maximum number in attendance at any one time was about 135; altogether, more than 200 members visited the camp during its operation. The magnitude of the task in organizing and arranging transport for so large a number, as well as the maintenance of the camp, entitles Director Wheeler and the other officers of the club to very great credit, especially in view of the delay caused by snow conditions at the outset.

The Assiniboine camp and that at Mt. Robson in 1914 may well be regarded as the most successful undertakings of the Alpine Club of Canada from the standpoint of mountaineering as well as the difficulties of transportation to be overcome.

Mt. Assiniboine, Canada, objective of the Alpine Club of Canada in 1920.

Photograph by W. E. Stone.

Photographs by R. L. Glisan

Upper—The San Joaquin below upper Jackass Meadows. Middle—Muir Pass. Lower—On the Middle Fork of the King in Le Conte Canyon.

The Sierra Club Outing *of* 1920

By Rodney L. Glisan

Eleven years ago I had the pleasure of going through Yosemite National Park with John Muir, and this past summer I spent a month with the Sierra Club, tramping over the new John Muir trail.

California, justly proud of her famous glacial expert and nature lover, has recently carved a trail down the granite backbone of the Sierra Nevada in memory of Muir—a most appropriate monument—and has thus opened up a hitherto practically unexplored region, which the Sierra Club made the objective of its 1920 outing.

On the evening of July 2, the party left Oakland Pier, and at Fresno, the next morning, changed to day coaches for El Prado, to the northeast, and there we boarded flat-cars equipped with board seats. The small but energetic locomotive took our improvised observation train up 5,000 feet of grade. Far below we could see the San Joaquin River, and beyond we secured our first glimpse of the Sierra.

At Cascada, the end of the line, we examined the huge electric plant where water from Huntington Lake, two thousand feet above, generates electricity which supplies light and power to Los Angeles, hundreds of miles to the southward. Huntington Lake is 7,000 feet above sea level. It was recently formed by damming several canyons with huge walls of concrete and converting a meadow into an attractive lake.

At the upper end of the lake, among the pines, we spent several days waiting for the pack train to arrive.

Leaving the lake, the trail followed up a small watercourse through the forest, where blood-red snow plants indicated recent snow. Thrushes, tanagers and warblers sang in willow thickets bordering grassy flower-dotted glades.

At Kaiser Pass, over 9,000 feet in elevation, we spent several hours in viewing the region beyond, vainly trying to locate our route through the sea of evergreen and identify the countless jagged peaks along the horizon.

The first night out we spent at Mono Hot Springs, among the cottonwoods and pines on the south fork of the San Joaquin, where we had the choice of hot baths at the springs or a plunge in the clear pools of the river. While the main party waited here several days, small parties knapsacked up Bear Creek and other side canyons, fishing the streams and climbing the peaks, picking our way above the river over granite slopes highly polished by glacial action. Granite

erratics poised menacingly on ledges where sturdy junipers, deep rooted in cracks in the granite slope for centuries, had bravely fought the gales and winter storms. Following up the San Joaquin, we came to Jackass Meadows, the name being more fittingly applied to the one who named it than to the most wonderful of the mountain meadows of the Sierras, where every meadow is a masterpiece.

Camp was established on the river bank at a point where the San Joaquin, hemmed in between low granite walls, plunges in a riotous mass of leaping white water. Here the same power company which created Huntington Lake is preparing to spend many millions in damming the meadow, planning to drive the accumulated water through a tunnel piercing the mountain range to supplement the present supply in Huntington Lake, twenty miles away. To overcome the insurmountable difficulty of building a road, they plan to carry their cement and steel over the range in airplanes and drop the supplies into huge rope nets on the meadow floor.

The fishing was excellent, and a near-by soda spring proved very popular.

Leaving the meadows, we followed the San Joaquin up through a series of flower-carpeted, forest-fringed meadows to its source in Evolution Lake, a mirror of deep blue filling a glacier-scooped basin 11,000 feet in elevation, with peaks several thousand feet higher, forming an amphitheatre around the lake. Hailstones awakened us at night as we lay in the open on the moss and heather by the lake,—a few white-bark pines, the only treees at this altitude, affording scant shelter.

Here a small party made a first ascent of Mt. Haeckel, 13,400 feet in elevation, working their way up a snow-slope, through rock chimneys, up a series of ledges requiring careful maneuvering to secure holds for the hands and feet, and over huge granite blocks, to the topmost block forming the summit. The view of the lakes below and of the bewildering mass of peaks circling the horizon, amply rewarded us for the strenuous climb. We returned to the main party camped at Colby Meadow. From here we hoped to make Muir Pass. Beyond and above Evolution Lake lay Wanda Lake, partly covered with snow-crusted ice, and above lay Muir Pass, over 12,000 feet high, the trail hidden under a blanket of snow, high above timber line, bleak and austere. It was an anxious time for our leader, as nearly all the provisions lay on the other side of the pass. Sending an advance string of the toughest mules to break the trail, he had the party follow and a trail was thus made, through which the pack-train carried 18,000 pounds of dunnage and equipment across a pass higher than

Mt. Hood. Over this roof of the western hemisphere we went, and then down into Little Pete Valley in Le Conte Canyon, which is so narrow that we had great difficulty in finding sufficient camping space on the small stream (the source of the King River), which flows at its bottom in a southerly direction exactly opposite from the San Joaquin, which we had left on the other side of the range. A granite wall rose 3,000 feet sheer above us, the top of which was lit by the sun's rays long after we had been left in the shade.

Down the middle fork of the King we went, stopping at Grouse Meadows to rest the pack-train and to make more knapsack trips and more first ascents; also to give the anglers their first catches of golden trout, one of the gamiest and most beautiful trout known. In the little mountain meadows, in the side valleys and on the benches above, botanists found a wealth of flowers, each rise in elevation giving different species. One knapsack party made a first ascent of an unnamed peak nearly 13,000 feet in elevation, climbing from Deer Meadow, disturbing thrushes and humming birds below and grouse further up, as they made their way through brake and sagebrush, gooseberry and wild rose; the slopes dotted with paintbrush, penstamen, purple asters, primroses and other attractive flowers, junipers succeeding pines, and in turn giving way to the white-bark pine.

At Amphitheatre Lake, on a bench on the other side of Deer Meadow, we found dwarf hemlock and inch-high huckleberry bushes, while heather fringed one side of the lake and snow drifts the other side.

Another stop at Simpson Meadows, among huge pines and cedars, made the anglers as radiant as the rainbow trout they caught in the King, now a good-sized stream. The trail down the King from Simpson Meadows to Tehepite Valley followed the river through an evergreen forest; the river a series of cascades and deep pools, where rainbow trout rose like lightning to the fly.

As we approached Tehepite Valley, the pines and cedars gave way to cottonwoods and live oaks, the difference in elevation being nearly two thousand feet. Several days spent in Tehepite Valley gave the party ample opportunity to explore this rival of the Yosemite, camera and fishing-rod being used almost continuously. Tehepite Dome, a curiously formed glacial knob of granite, rose 3,600 feet above our camp, with a sheer solid face of rock. Over its left shoulder fell Crown Creek Falls, the white water contrasting beautifully with the gray granite wall.

The effect of the lower elevation was very noticeable in the lessened activities of the party. Deer were seen near the river, bear above it, and several rattlesnakes were killed on the rocks near the river.

The trail leaving the valley zigzagged up the mountain wall four thousand feet vertically in three miles of trail. We made it in the early morning, pausing at different points to enjoy the view over the valley, with its changing lights and shadows.

From our camp at Gnat Meadow a few camera enthusiasts climbed the Tombstone, where we could look down on Tehepite Dome, a queer contrast when we recalled how it had dominated our upward outlook from the camp below.

We camped one night on the north fork of the King, and two days later completed the circle, reaching Huntington Lake after a month of wandering, refreshed in body but with minds somewhat dazed by the shifting panorama of magnificent scenery which the trip had afforded. Each day we had feasted on new scenery and revelled in sunshine, and each night we had slept under the starry firmament.

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Flora *of* *Hamilton Mountain, Washington

By M. W. Gorman

Hamilton mountain, a small volcanic peak 2,432 feet high, is situated in Skamania County, Washington, some eight or ten miles west of the crest line of the Cascade Mountains, with its summit about three miles north of the Columbia River.

The prevailing rock here, as elsewhere in the Cascade Range, is basalt. The north side of the mountain slopes away very gradually and consequently is fairly smooth and unbroken, while the south side, which has a dip of about 800 feet to the mile, is proportionately precipitous and broken, with a few almost perpendicular cliffs, several steep

*Hamilton Mountain was named after the late Samuel J. Hamilton, of Lower Cascades, Washington, a native of Indiana and a pioneer of 1850, who was born April 9, 1818, died February 11, 1889. It is worthy of note here that Hamilton and his family narrowly escaped massacre in the Yakima and Cascades Indian outbreak on March 26, 1856, when several settlers and five soldiers fell victims to the fury of the Indians in the vicinity of the middle block-house.

jagged rocky exposures, and two deep ravines which have been slowly eroded by the two small streams which drain this slope into the Columbia River. Hardy Creek, the larger of these, is a beautiful mountain stream, broken at an elevation of 840 feet by the enchanting Rodney Falls, where it tumbles over a series of precipitous basaltic rocks, forming a charming "cave of the winds," and breaking into a mass of spray, only to re-unite again into a sober mountain stream at the lower levels, where it is joined by the waters of Maple Springs, the favorite picnic ground on this mountain.

Rodney Falls, with its wet, mossy rocks, and moist banks, is the chosen habitat of such plants as the saxifrages, bishop's caps, mitre-worts, bolandras, white shooting stars, monkey flowers, and various ferns, and the home and playground of such birds as the water ousel. The south side is therefore very much more interesting to bird-lover and botanist alike. The rocky cliffs offer a suitable habitat for rupestrine plants, the banks of the stream for hydrophilous plants, and the coniferous woods one for the shade-loving species. The proximity of the peak to the main divide of the Cascade Mountains also offers a favorable colonizing ground for certain migratory species that properly belong to the more arid region east of the range. This is amply evidenced by the fact that in the limited collection made in the past season, ten species that are indigenous to the eastern section of Oregon and Washington are included, viz: Cliff selaginella, Vasey's blue-grass, hairy mountain sandwort, pyramidal spiraea, large-head clover, mountain hollyhock, lobed Clarkia, woolly yarrow, nodding bristle-head and lion-tooth agoseris. It would be interesting to compare the present list with a similar list for Archer Mountain, a small peak 2,012 feet high, and five miles further westward. In the opinion of the writer, a collection of plants from the latter peak will probably show a considerable decrease in these transmontane species. It is therefore to be hoped that such a collection will be made within the next two or three years. The total number of species collected on Hamilton Mountain was one hundred and ninety-eight, of which thirteen are trees, twenty-six are shrubs, and one hundred and fifty-nine are herbaceous plants. Of these one hundred and ninety-eight species, one hundred and eighty are indigenous plants, and eighteen are introduced weeds from Europe. It is quite probable that a careful working of the field would yield at least sixty additional species.

Among the most abundant species on the mountain, the following six show the greatest number of individuals, viz: Small-head clover,

spreading phlox, blue gilia, narrow-leaved phacelia, large Collinsia and red corn salad.

Of the rarer species, the following twelve are probably the most notable, viz: Western white pine, Oregon wind-flower, slender whitlow-grass, northern rock saxifrage, western choke-cherry, yellow shoe-strings, lesser willow-herb, greenish-flowered wintergreen, lesser blue beard-tongue, Scouler's valerian, gum-weed and water arnica.

The mountain is included in the Mount Hood quadrangle of the U. S. Geological Survey, and can be reached in about two hours by rail from Portland, thus furnishing an easy one-day trip. The view from the summit is unsurpassed for this elevation, and the trip will amply repay the botanist, geologist, ornithologist, photographer or tourist, especially considering the short time required to make the climb. The mountain has been visited by both the Mazamas and the Trails Club, and Mr. H. J. Biddle has recently caused a good trail to be constructed to the summit, with a grade not exceeding fifteen per cent in the steepest part. The following list has therefore been made, so that those who visit the peak can form a better idea of the ferns and flowers to be found there.

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LIST OF SPECIES.

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POLYPODIACEAE . . . . . FERN FAMILY

Filix fragilis, (L.) Underw. . . . . . *Bladder Fern*
Moist cliffs and rocky slopes, 850 ft. No. 4568, June 7.

Polystichum munitum, (Kaulf.) Presl. . . . . . *Christmas Fern*
Very common in open woods. 850 ft. No. 4565. June 7.

Cryptogramma acrostichoides, R. Br. . . . . . *Rock Brake*
In rocky crevices near south base. Not uncommon. June 7

Asplenium trichomanes, L. . . . . . *Maidenhair Spleenwort*
Not uncommon in clefts on dry rocky slopes. No. 4567. June 28.

Adiantum pedatum aleuticum, Rupr. . . . *Maidenhair Fern.*
Not uncommon on moist rocky slopes near Rodney Falls. 850 ft. No. 4566. June 7.

Polypodium occidentalis, (Hook.) Maxon . . . . *Licorice Fern*
Common on moist mossy rocks, logs and trees, about and below Rodney Falls. No. 4567. June 7.

SELAGINELLACEAE . . . . . TREE-MOSS FAMILY

Selaginella Rosendahlii . . . . . *Cliff Selaginella*
Common on steep rocky slopes, 1700 ft. Nos. 4594, 4644. June 7.

PINACEAE . . . . . PINE FAMILY

Pinus monticola, Dougl. . . . . . *Western White Pine*
Rare on rocky slopes. 2430 ft. No. 4623.

Tsuga heterophylla, (Raf.) Sarg. . . . . . *Western Hemlock*
Not uncommon on wooded slopes about the base. June 21.

Pseudotsuga mucronata, (Raf.) Sudw. . . . . . *Douglas Fir*
Common on all slopes up to about 2400 ft. June 21.

Abies grandis, Lindl. . . . . . *Lowland Fir*
Infrequent, mingled with Douglas Fir. June 21.

Thuja plicata, Donn. . . . . . *Western Red Cedar*
Rather rare on moist wooded slopes up to about 1200 ft. June 21.

POACEAE . . . . . GRASS FAMILY

Koeleria cristata. (L.) Pers. . . . . . *Crested Koeler Grass*
Common on open grassy and rocky slopes at 1100 to 1500 ft., growing in tufts. Nos. 4589, 4632, 4652. June 21.

Bromus pacificus, Shear. . . . . . *Pacific Brome Grass*
Open woods near south base. Not uncommon. 5020. July 3.

Poa Vaseyochloa, Scrib. . . . . . *Vasey's Blue Grass*
A slender grass infrequent on open rocky slopes about 1400 ft. No. 4586. June 7.

Festuca megalura, Nutt. . . . . . *Smooth Fescue*
Not uncommon on open rocky slopes about 800 ft. No. 4509. May 27.

Festuca viridula, Vasey. . . . . . *Mountain Fescue.*
Growing in tufts on open rocky slopes about 1700 ft. No. 4630. Common. June 21.

Elymus glaucus, Buckl. . . . . . *Smooth Wild Rye*
Open grassy slopes, 1400 ft. Not uncommon. No. 5047. July 3.

ARACEAE . . . . . ARUM FAMILY

Lysichiton Kamtschatcense, (L.) Schott . . . . *Western Skunk Cabbage*
Common in boggy ground along Hardy Creek. May 27.

JUNCACEAE . . . . . RUSH FAMILY

Juncoides campestre comosum, (Meyer) Ktze. . . . *Slender Wood Rush*
Infrequent on grassy slopes about 1800 ft. Nos. 4627, 4629. June 21.

LILIACEAE . . . . . LILY FAMILY

Stenanthium occidentale, Gray . . . . . *Grass-leaved Lily*
Infrequent on grassy slopes about 1200 ft. Nos. 4503, 4522. May 27.

Zygadenus venenosus, Wats. . . . . . *Poison Camas*
Grassy slopes, 1200 to 1500 ft. Not uncommon. No. 4521, 4587. June 7.

Trillium ovatum, Pursh. . . . . . *Large Wake-robin*
Common in open woods up to the summit, 2432 ft., where it was found blooming through 5 inches of snow. Apl. 24, 4857, 4876.

Disporum oreganum, (Wats.) B. & H. . . . . . *Oregon Fairy Bells*
Open woods up to 600 ft. Not uncommon. No. 4854. April 24.

Vagnera amplexicaulis, (Nutt.) Greene . . . . *False Solomon's Seal*
In moist rich woods near south base. June 7.

Vagnera sessilifolia, (Baker) Greene . . . *Western Solomon's Seal*
Moist woods up to about 800 ft. Not uncommon. June 7.

Maianthemum bifolium kamtschaticum, Griseb. . *Wild Lily-of-the-Valley*
Not uncommon in open woods near south base. June 7.

Allium acuminatum, Hook. . . . . . *Western Wild Onion*
A handsome species with rose purple flowers and terete scapes that increase in diameter from base to tip, the 2-3 terete leaves withering promptly at flowering. Not uncommon on open grassy slopes about 1600 ft. No. 4582. June 7.

Allium cernuum, Roth . . . . . *Nodding Wild Onion*
A taller species with pale pink flowers that bloom about two weeks later than A. acumination. A difficult plant to dry. Common on rocky slopes 1200 to 1700 ft. Nos. 4613, 4682. June 21.

Lilium columbianum, Hanson . . . . . *Pacific Tiger Lily*
Not uncommon in open woods about the base. No. 4555. June 7.

Fritillaria lanceolata, Pursh . . . . . *Checkered Lily*
Open places near the south base. Infrequent. May 27.

IRIDACEAE . . . . . IRIS FAMILY

Iris tenax, Douglas . . . . . *Purple Flag*
Open grassy places about the S. base. Common. May 27.

ORCHIDACEAE . . . . . ORCHID FAMILY

Piperia unalaschensis, (Spreng.) Rydb. . . . . *Slender Orchis*
Infrequent on open grassy slopes, 1700 ft. Nos. 4628, 4648. June 21.

Corallorhiza striata, Lindl. . . . . . *Striped Coral-root*
Open woods at low elevations. Not uncommon. No. 4561. June 7.

Cytherea bulbosa, (L.) House . . . . . *Calypso*
Moist mossy woods, 400 ft. and along banks of Hardy Creek. No. 4856. Infrequent. Sweetly fragrant. Flrs. rose-purple, rarely dull white.

Peramium decipiens, (Hook.) Piper . . . . *Rattlesnake Plantain*
Common in open woods up to 700 ft. No. 4641. June 28.

SALICACEAE . . . . . WILLOW FAMILY

Salix Scouleriana, Barr. . . . . . *Western Pussy Willow*
Common in open woods and on moist flats. June 7.

POLYGONACEAE. . . . . BUCKWHEAT FAMILY

Eriogonum compositum, Dougl. . . . . *Woolly-leaved Eriogonum*
Steep rocky slopes, 800 to 1600 ft. Not uncommon. No. 4609. June 21.

Rumex Acetosella, (L.) . . . . . *Sheep Sorrel*
Not uncommon in open grassy places near south base. June 21.

Rumex occidentalis, Wats. . . . . . *Western Dock*
Infrequent in moist woods at south base.

ARISTOLOCHIACEAE. . . . . BIRTHWORT FAMILY

Asarum caudatum, Lindl. . . . . . *Wild Ginger, Nigger-baby*
Open woods up to 800 ft. Common. June 7. The handsome brown-purple flowers are rather inconspicuous but both plants

and flowers exhale a fragrant ginger-like odor. The resemblance of the flower, with its long-tailed calyx-lobes, to a negro baby in swaddling clothes is accountable for one of the above common names.

PORTULACACEAE. . . . . PURSLANE FAMILY

Claytonia parviflora, Dougl. . . . . . *Indian Lettuce*
Open woods and moist rocky slopes. Not uncommon. No. 4502. May 27.

Claytonia sibirica, L. . . . . . *Northern Miner's Lettuce*
Common in moist open woods near south base. June 7.

Lewisia columbiana, (Howell) Rob. . . . *Mountain Bitter-root*
Rocky slopes, 1200 to 2000 ft. Not uncommon. No. 4537, 4681. June 7. A conspicuous plant with deep-seated, ffeshy roots, thick fleshy leaves, and an ample panicle of showy flowers. The petals rose-red to pale pink with dark red veins.

CARYOPHYLLACEAE. . . . . PINK FAMILY

Silene antirrhina, L. . . . . . *Sleepy Catch-fly*
Steep, rocky and grassy slopes, 1800 ft. Not uncommon. No. 4626. June 21.

Silene Douglasii, Hook. . . . . . *Douglas' Campion*
Fairly common on dry grassy slopes, 1700 ft. No. 4646. May and June. Growing in many-stemmed tufts. Flowers cream white to pale pink.

Silene Douglasii brachycalyx, Rob. . . . . *Bell-flowered Campion*
With the type. Not uncommon at 1400 ft and upwards. No. 4507. May 27. Flowers cream white to pinkish or occasionally red.

Silene noctiflora. L. . . . . . *Night-blooming Catch-fly*
Infrequent in open woods, 600 ft. No. 4560. June 7. Adv. from Europe.

Cerastium arvense, L. . . . . . *Field Chickweed*
Grassy slopes, 1500 ft. Not uncommon. No. 4528, 4573. June 7.

Arenaria Nuttallii, Pax . . . . . *Nuttall's Sandwort*
Rocky slopes, 1400 ft. Not uncommon. No. 4510. May 27.

Arenaria verna pubescens, C. & S. . . . . *Hairy Mountain Sandwort*
Fairly common on dry rocky slopes. No. 4640. June 28.

Moehringia macrophylla, (Hook.) Torr. . . . *Large-leaved Sandwort*
In open woods near the south base. Infrequent. June 7.

RANUNCULACEAE. . . . . BUTTERCUP FAMILY

Actaea spicata arguta, (Nutt.) Torr. . . . . *Western Baneberry*
Fairly common in moist open woods near south base. No. 4557. June 7.

Cimicifuga elata, Nutt. . . . . . *Western Bugbane*
Open woods about south base. Not uncommon. No. 4554. June 7.

Aquilegia formosa, Fisch. . . . . . *Western Columbine*
Not uncommon in open coniferous woods. No. 4498. May 27.

Delphinium columbianum, Greene. . . . . *Hoary Larkspur*
Infrequent on open wooded slopes. 1400 ft. No. 4584. June 7.

Thalictrum occidentale, Gray. . . . . . *Western Meadow Rue*
Open woods up to 800 ft. Infrequent. No. 4858. April 24.

Anemone deltoidea, Hook. . . . . . *Woodland Anemone*
Common in open woods up to 2000 ft. No. 4577. June 7.

Anemone oregana, Gray. . . . . . *Oregon Wind-flower*
Infrequent in open woods about south base. Flowers blue to lavender, rarely pink or white. No. 4850. April 24.

BERBERIDACEAE. . . . . BARBERRY FAMILY

Berberis Aquifolium Pursh . . . . . *Oregon Grape*
Open coniferous woods about south base. Infrequent. May 27.

Berberis nervosa Pursh . . . . . *Low Oregon Grape*
Common in moist open woods up to 900 ft. May 27.

Vancouveria hexandra, (Hook.) Mor & Dcne. . *Barrenwort. Umbrella Flower*
In moist, dense woods. Common. June 7.

Achlys triphylla, (Smith) D C. . . . . . *Vanilla Leaf*
Common in open coniferous woods up to 900 ft. June 7.

FUMARIACEAE. . . . . FUMITORY FAMILY

Bikukulla formosa, (Andr.) Coville . . . *Western Bleeding-heart*
In moist woods and along Hardy Creek. Not uncommon. June 7.

CRUCIFERAE. . . . . MUSTARD FAMILY

Brassica arvensis (L.) Kuntze. . . . . . *Charlock*
Roadsides and open woods near south base. Infrequent. May 27. Nat. from Europe.

Brassica campestris L. . . . . . *Wild Turnip*
Waste places and open woods about south base. Infrequent. May 27. A weed introduced from Europe.

Brassica nigra, (L.) Koch . . . . . *Black Mustard*
Waste places and open woods about south base. Infrequent. May 27. A common weed. Nat. from Europe.

Draba nemorosa leiocarpa, Lindb. . . . *Slender Whitlow-grass*
Grassy slopes 1500 ft. Rare. Flowers small, yellow. No. 4869. April 24.

Arabis hirsuta Scop. . . . . . *Hairy Rock-cress*
Rocky slopes near south base. Infrequent. No. 4501. May 27.

Dentaria macrocarpa pulcherrima, (Greene) Rob. . . *Mountain Toothwort*
Infrequent in open woods up to the summit, 2432 ft. where it occurred blooming through 5 inches of snow. Nos. 4859 4877. April 24.

Dentaria tenella, Pursh . . . . . *Lesser Toothwort*
Moist open woods up to 600 ft. Common. No. 4855. April 24.

Erysimum elatum, Nutt. . . . . . *Tall Wall-flower*
Grassy slopes about the south base. Not uncommon. No. 4532. May 27.

CRASSULACEAE. . . . . STONECROP FAMILY

Sedum spathulifolium, Hook. . . . . . *Mealy Stonecrop*
Rocky slopes 800 to 1400 ft. Common. No. 4569. June 7.

Sedum stenopetalum ,Pursh . . . . . *Narrow-leaved Stonecrop*
Infrequent on rocky slopes. 1200 ft. Nos. 4526, 4615, 4651. June 21.

SAXIFRAGACEAE. . . . . SAXIFRAGE FAMILY

Saxifraga rufidula, (Small) Piper . . . . *Red-woolly Saxifrage*
Wet rocky crevices, Rodney Falls. Infrequent. No. 4631. June 21.

Bolandra oregana Wats. . . . . . *Northern Rock Saxifrage*
Wet rocks, 850 ft. A rare species here, with campanulate green calyx and narrow, lavender-purple petals. No. 5039. July 3. This genus of the Saxifrage family has been named in honor of Dr. Henry N. Bolander, for many years professor of botany in St. Helens Hall, Portland, Oregon, b. Feb. 22 1830. d. August 28, 1897.

Heuchera glabra Willd. . . . . . *Northern Alum-root*
Rocky cliffs and slopes near south base. Not uncommon. June 7.

Tellima grandiflora, (Pursh) Dougl. . . . . *Western Bishop's Cap*
Moist rocky canyon, 2000 ft. Infrequent. No. 4616. June 21.

Tellima parviflora, Hook. . . . . . *Prairie Fringed Saxifrage*
Open rocky slopes, 1200 ft. Infrequent. No. 4553. June 7.

Leptaxis Menziesii, (Pursh) Raf. . . . . . *Bud-leaf Mitrewort*
Moist rocky canyon 2000 feet, not uncommon. Nos. 4617 4669 June 21.

Philadelphus Gordonianus, Lindl. . . . . *Western Syringa*
Moist open woods about south base. Not uncommon. June 7. The showy, white flowers are faintly but sweetly fragrant.

Ribes divaricatum Dougl. . . . . . *Western Wild Gooseberry*
Moist open woods about south base. A tall slender gooseberry bush sometimes 12 ft. high with white flowers and purplish black fruit of excellent flavor. No. 5024. July 3.

ROSACEAE. . . . . ROSE FAMILY

Physocarpus opulifolius, (L.) Maxim . . . . . *Nine-bark*
Open woods between the south base and Rodney Falls. Not uncommon. May 27.

Spiraea lucida, Dougl. . . . . . *Low Spiraea*
Open woods, 1200 ft. Infrequent. May 27.

Spiraea pyramidata, Greene . . . . . *Pyramidal Spiraea*
A very variable and handsome species in open woods about the south base and on rocky slopes up to 2100 ft. As found here the flowers are pale lavender-pink. No. 4619 4656 4676. June 21.

Aruncus sylvester, Kost. . . . . . *Goat's Beard*
Moist open woods near south base. Not uncommon. May 27

Holodiscus discolor, (Pursh) Maxim . . . . . *Ocean Spray*
Common in open woods about south base. May 27.

Amelanchier florida, Lindl. . . . . . *Western Service-berry*
Not uncommon in open woods from base to summit, blooming successively from April 1 to June 1, according to elevation. Nos. 4578, 4582. April—June 7.

Rubus macropetalus, Dougl . . . . . *Trailing Blackberry*
Common in open woods about the south base. June 21.

Rubus parviflorus, Nutt. . . . . . *Western Thimbleberry*
Rocky slopes and open woods up to 850 ft. Common. No. 4611. June 21.

Rubus thyrsanthus, Focke . . . . . *Himalaya Berry*
This aggressive species is the most recent addition to our introduced blackberries and promises to become eventually as common as the Evergreen Blackberry. First observed as an escape or accidental introduction only about fifteen years ago. It is now well established in the Willamette Valley, Ore., and in several of the counties of Western Washington. It is quite hardy, the foliage being able to withstand a temperature of zero to 4 degrees below without any serious injury. It bears abundantly a fruit of good flavor. Its resistance to cold is rather better than that of the Evergreen Blackberry and as it has only been introduced here for some fifteen years while the Evergreen has been present for seventy-five years (having been introduced into Oregon from the Sandwich Islands in 1844) it is a justifiable prediction to make that sixty years hence it will be as well established in the Northwest as the Evergreen Blackberry is at present.† Observed growing sparingly along the county road near the south base. June 21.

†The above specific name is here given with some hesitation regarding its correctness, but in the absence of a more authentic title it is the only one available at present.

Geum macrophyllum, Willd. . . . . . *Large-leaved Avens*
Infrequent in open woods near the south base. June 7.

Fragaria crinita, Rydb. . . . . . *Hairy Wild Strawberry*
Grassy slopes, 1500 ft. Infrequent. No. 4572. June 7.

Drymocallis glandulosa, (Lindl.) Rydb. . . . . *Glandular Cinquefoil*
Common on rocky slopes at 1400 ft. No. 4511. May 27.

Rosa gymnocarpa Nutt. . . . . . *Forest Rose*
Infrequent in open woods and on rocky slopes from the base to 2400 ft. Nos. 4575, 4612. June 21.

Rosa nutkana, Presl. . . . . . *Pacific Wild Rose*
Open woods and rocky slopes up to 2000 ft. Not uncommon. Flowers deep pink with white centre rather larger than usual the shrub itself smaller than usual, not exceeding 12 to 18 inches in height, on the upper slopes. Nos. 4850, 4620. June 21.

Rosa pisocarpa, Gray . . . . . *Woodland Rose*
Infrequent in open woods near the south base. June 7.

Rose rubiginosa, L. . . . . . *Sweetbrier*
Open woods about the south base. Infrequent. June 21. Nat. from Europe. Both flowers and seed capsules of this species are fragrant.

Prunus emarginata erecta, (Presl) Piper . . . *Woolly Bitter Cherry*
Not uncommon in open woods about the summit, 2432 ft. No. 4577. June 7.

Prunus demissa, (Nutt.) Dietr. . . . . *Western Choke Cerry*
A small tree (frequently only a shrub) in open woods about 1500 ft. with numerous white flowers and red, occasionally purple-black fruit. Infrequent. June. It is worthy of note that while this species is rare here it is quite common on Archer Mountain only five miles westward.

LEGUMINOSAE . . . . . PEA FAMILY

Lupinus polyphyllus, Lindl. . . . . . *Blue Pod. Showy Lupine*
Common along the county road near the south base. May 27.

Trifolium hybridum L. . . . . . *Alsike Clover*
Open woods and roadsides about the south base. Not uncommon. May 27.

Trifolium macrocephalum, (Pursh) Poir. . . . . *Large-head Clover*
Infrequent on rocky slopes, 1400 ft. No. 4516. May 27. The long stout root (10 to 22 inches long) of this species enables it to maintain itself on the dry slopes and ridges which here form its habitat. This is the first recorded occurrence of the species west of the Cascade Mountains.

Trifolium microcephalum, Pursh . . . . . *Small-head Clover*
Not uncommon on rocky slopes, 1600 to 2000 ft. Flowers pale pink. Nos. 4624, 4645. June 21.

Trifolium procumbens, L. . . . . . *Low Hop-Clover. Yellow Clover*
Open woods and roadsides near south base. Not uncommon. June 21. Nat. from Europe.

Trifolium repens, L. . . . . . *White Clover*
Common in open woods and grassy slopes about south base. June 21. Nat. from Europe.

Trifolium tridentatum, Lindl. . . . . . *Three-toothed Clover*
Rocky slopes 1800 ft. Not uncommon. No. 4625, 4650. June 21. Corolla purple, leaving an oily stain on the paper when drying.

Hosackia americana, (Nutt.) Piper . . . . . *Bird's-foot Trefoil*
Grassy and rocky slopes, 1700 ft. Not uncommon. No. 4647. June 28.

Hosackia decumbens, Benth. . . . . . *Yellow Shoe-strings*
Infrequent in open woods and rocky slopes. 2200 ft. No. 4675. June 28.

Vicia americana, Muhl. . . . . . *American Vetch*
Common in open woods about south base. June 7.

Lathyrus polyphyllus, Nutt. . . . . . *Forest Pea*
Common in open coniferous woods near south base. June 7.

GERANIACEAE. . . . . GERANIUM FAMILY

Geranium carolinianum, L. . . . . . *Carolina Crane's-bill*
Grassy and rocky slopes, 1400 ft. Infrequent. No. 4653. June 28. Flowers very pale pink.

OXALIDACEAE. . . . . WOOD-SORREL FAMILY

Oxalis oregana, Nutt. . . . . . *Oregon Wood-sorrel*
Common in moist woods up to 800 ft. June 21.

ANACARDIACEAE. . . . . SUMACH FAMILY

Rhus diversiloba, T. & G. . . . . . *Western Poison Oak*
Open woods, occasionally found climbing on fir trees or steep rocky cliffs. Not uncommon. June 7.

ACERACEAE. . . . . MAPLE FAMILY

Acer circinatum, Pursh . . . . . *Vine Maple*
Common in moist woods and stream banks. June 21.

Acer Douglasii, Hook. . . . . . *Dwarf Maple*
Infrequent on rocky slopes up to 2400 ft. A small tree here. No. 4622. June 21.

Acer macrophyllum, Pursh. . . . . . *Oregon Maple*
Fairly common up to 900 ft. No. 4623. June 28.

RHAMNACEAE. . . . . BUCKTHORN FAMILY
Ceanothus sanguineus, Pursh . . . . . *Woodland Spray*
Infrequent in open woods near south base. June 7.

MALVACEAE. . . . . MALLOW FAMILY
Sphaeralcea rivularis, (Dougl.) Torr. . . . . *Mountain Hollyhock*
Roadsides and open woods about south base. Not uncommon. No. 4607. June 21. A tall plant with handsome rose-colored flowers about 2¼ inches in diameter, and quite worthy of cultivation. Now first recorded as occurring west of the Cascade Mountains. This plant is also not uncommon in the valleys of Canyon Creek and Washougal River, several miles further westward.

VIOLACEAE. . . . . VIOLET FAMILY
Viola adunca, Smith . . . . . *Western Dog Violet*
Infrequent on open grassy slopes about the south base. April and May.

Viola glabella, Nutt. . . . . . *Smooth Yellow Violet*
Not uncommon on grassy slopes and open woods from base to summit. 2432 ft. No. 4576. June 7.

ONAGRACEAE. . . . . EVENING PRIMROSE FAMIOY
Epilobium angustifolium, L. . . . . . *Fireweed*
Common on roadsides and in open woods at south base. June 7.

Epilobium minutum, Lindl. . . . . . *Small Willow-herb*
Infrequent on grassy slopes, 1500 ft. No. 4574. June 7.

Godetia quadrivulnera, (Dougl.) Spach . . *Western Evening Primrose*
Common on rocky slopes, 1200 ft. No. 4614. June 21. Petals rose-purple with a darker spot near the apex, becoming bluish-purple on drying.

Clarkia pulchella, Pursh . . . . . *Lobed Clarkia*
Rare in open woods about south base. No. 4559. June 7. Indigenous east of the Cascade Mountains, possibly introduced here.

UMBELLIFERAE. . . . . PARSLEY FAMILY
Osmorhiza divaricata, Nutt. . . . . *Northern Sweet Cicely*
Infrequent in open woods about south base. No. 5019. July 3.

Leptotaenia dissecta, Nutt. . . . . . *Cut-leaved Parsnip*
Infrequent on rocky slopes, 1600 ft. No. 4530. May 27. Flowers small, brown-purple, retaining color well on drying.

Cogswellia nudicaulis, (Pursh) Jones . . *Few-leaved Parsley, Wah-pan*
Infrequent on rocky slopes, 1400 ft. Nos. 4520, 4649. June 28. The young stems and foliage, both raw and boiled in soups or stews, were and still are a favorite food of the Northwest Indiana, by whom it is known as Wah-pan.

Cogswellia Martindalei, (C. & R.) Jones . . . Martindale's Parsley
Steep rocky slopes, 1800 ft. Infrequent. No. 4871. April 24.
The roots of this plant are frequently 20 inches long or more, thus enabling the species to maintain itself on dry, rocky slopes and bluffs.

Cogswellia triternata, (Pursh) Jones . . . Deep-rooted Parsley
Rocky slopes up to 1800 ft. Infrequent. No. 5029. July 3.
This species is also notable for its very deep-seated roots.

Heracleum lanatum, Michx. . . . . Cow Parsnip
Not uncommon in moist woods about the south base and up to 900 feet. June 7. The young shoots and leaf stalks, eaten raw, are a favorite food of the Indians.

Daucus Carota, L. . . . . Wild Carrot
Roadsides and open places about the south base. A common weed introduced from Europe.

CORNACEAE. . . . . DOGWOOD FAMILY

Cornus Nuttallii, Aud. . . . . Western Dogwood
Not uncommon on moist slopes up to 900 ft. May 27.

ERICACEAE. . . . . HEATHER FAMILY

Pyrola chlorantha, Swartz . . . . Greenish-flrd. Wintergreen
Rare in open woods about south base. No. 5033. July 3. .

Arctostaphylos tomentosa, (Pursh) Dougl. . . . Bristly Manzanita
Infrequent on dry rocky slopes. No. 4639. June 28.

Arctotaphylos Uva-ursi, (L.) Spreng. . . . . Kinnikinick
Open woods up to 1400 ft. Not uncommon. June 21.

Gaultheria Shallon, Pursh. . . . . Salal
Common in open woods and on rocky slopes. No. 4638. June 28.

Chimaphila Menziesii, (R. Br.) Spreng. . . Menzies' Prince's Pine
Common in moist woods at low elevations. No. 4508. May 27.

Chimaphila umbellata, (L.) Nutt. . . . . Prince's Pine
Not uncommon in moist, mossy woods at low elevations. No. 4642. June 28.

MONOTROPACEA. . . . . INDIAN PIPE FAMILY

Monotropa uniflora, L. . . . . Indian Pipe
Open coniferous woods up to 800 ft. Infrequent. Sporadic. No. 4684. July 19.

PRIMULACEAE. . . . . PRIMROSE FAMILY

Trientalis latifolia, Hook. . . . . Broad-leaved Starflower
Common in open woods up to 900 ft. June 7.

Dodecatheon dentatum, Hook. . . . . White Shooting-Star
Wet slopes and wet stream banks, Rodney Falls, 850 ft. and in steep, moist canyon at 2000 ft. Indrequent. No. 4515. June 21.

Douglasia laevigata, Gray . . . . . Mountain Primrose
Rare. In tufts on perpendicular rocky cliffs. 1800 ft. No. 4870. April 24.
A remarkable species with bright red, showy flowers that become rose-pink on drying. The woody base and strong, hardy roots enable the plant to find a foothold in rocky crevices and maintain life where other species would promptly perish. Named in

honor of David Douglas, the first botanist to make a thorough collection in the old Oregon country. Born June 26, 1798. Died July 12, 1834.

APOCYNACEAE. . . . . DOGBANE FAMILY

Apocynum androsaemifolium, L. . . . . . *Dogbane*

Rocky slopes in open woods, 2200 ft. Infrequent. No. 4674. July 19.

POLEMONIACEAE. . . . . PHLOX FAMILY

Phlox diffusa, Benth. . . . . . *Spreading Phlox*

Common on rocky slopes, 1000 to 1700 ft. No. 4517. May 27.

Collomia heterophylla, Hook. . . . . . *Thin-leaved Collomia*

Rocky slopes in open woods, Rodney Falls. No. 4564. June 7.

Gilia capitata, Hook. . . . . . *Blue Gilia*

Common on rocky slopes, 1200 ft. No. 4590. June 7.

Gilia gracilis, (Dougl.) Hook. . . . . . *Entire-leaved Gilia*

Rocky slopes, 1400 ft. Infrequent. No. 4571. June 7.

HYDROPHYLLACEAE. . . . . WATER-LEAF FAMILY

Hydrophyllum albifrons, Heller . . . . . *Pale Water-leaf*

Common in moist woods, 600 ft. No. 4562. June 7.

Phacelia linearis, (Pursh) Holz. . . . . . *Narrow-leaved Phacelia*

Very common in open woods and on rocky slopes, 1800 ft. No. 4581. June 7.

Phacelia nemoralis, Greene . . . . . *Large Phacelia*

Not uncommon in open woods up to 700 ft. No. 5036. July 3.

BORAGINACEAE. . . . . BORAGE FAMILY

Cryptantha Hendersoni, (Nels.) Piper . . . . . *Oregon Nievitas*

Open rocky slopes, 1400 ft. Common. Nos. 4500, 4512, 4583. June 7.

Amsinckia lycopsoides, Lehm. . . . . . *Pale Amsinckia*

Rocky slopes at low elevations. No. 4534. May 27.

LABIATAE. . . . . MINT FAMILY

Stachys ciliata, Dougl. . . . . . *Tall Hedge Nettle*

Common on roadsides and open woods at south base. No. 4655. June 28.

SOLANACEAE. . . . . POTATO FAMILY

Solanum Dulcamara, L. . . . . . *Bittersweet*

Roadsides and waste places about south base. No. 4497. May 27. A weed with handsome purple flowers. Nat. from Europe.

SCROPHULARIACEAE. . . . . SNAPDRAGON FAMILY

Collinsia grandiflora, Dougl. . . . . . *Large Collinsia*

Very common on rocky slopes, 1200 ft. No. 4588. June 7.

Collinsia tenella, (Pursh) Piper . . . . . *Lesser Collinsia*

On rocky slopes, 1200 ft. Not uncommon. June 7.

Pentstemon diffusus, Dougl. . . . . . *Spreading Beard-tongue*

Fairly common on grassy and rocky slopes, 1200 to 1800 ft. Nos. 4505, 4593, 4610, 4677. June 7.

Pentstemon ovatus, Dougl. . . . . . *Ovate-leaved Beard-tongue*

Rocky slopes, 1200 to 2000 ft. Common. Nos. 4518, 4621, 4636. June 21.

Pentstemon procerus, Dougl. . . . . *Lesser Blue Beard-tongue*
Grassy and rocky slopes 1800 ft. Infrequent. No. 4679. July 19.

Pentstemon Richardsonii, Dougl. . . . *Richardson's Beard-tongue*
Dry rocky slopes, 1800 ft. Infrequent. July 19.

Pentstemon rupicola, (Piper) Howell . . . . *Crimson Beard-tongue*
On rocky cliffs and slopes, 1400 ft. Infrequent. No. 4570. June 7. A half-shrubby plant with showy, rose-crimson flowers, usually growing in dense mats on rocky cliffs. Occurs also on Mitchell's Point, St. Peter's Dome, and Mt. Jefferson, Oregon.

Veronica Americana, Schwein. . . . . . *American Brooklime*
In wet places about south base. Not uncommon. June 7.

Mimulus alsinoides, Dougl. . . . . . *Cliff Mimulus.*
Moist rocky slopes Rodney Falls, 850 ft. Nos. 4513, 4563. June 7.

Mimulus Langsdorfii, Donn . . . . . *Yellow Mimulus*
Wet places and stream banks, Hardy Creek below Rodney Falls. Common. April to August.

Castilleja angustifolia, (Nutt.) G. Don. . . . . *Indian Paint Brush*
Rocky slopes, 1400 ft. Not uncommon. No. 4525. May 27.

PLANTAGINACEAE. . . . . PLANTAIN FAMILY

Plantago lanceolata, L. . . . . . *Rib-grass*
Common on roadsides and open grassy places near south base. A troublesome weed in fields, lawns and pastures. Nat. from Europe.

RUBIACEAE. . . . . MADDER FAMILY

Galium Aparine, L. . . . . . *Cleavers*
Moist open woods about south base. Common. June 7.

Galium kamtschaticum oreganum, (Britt.) Piper . . *Oregon Bedstraw*
Common in open woods at low elevations. No. 4556. June 7.

CAPRIFOLIACEAE. . . . . HONEYSUCKLE FAMILY

Sambucus glauca, Nutt. . . . . . *Blue Elderberry*
Not uncommon in open woods at low elevations. June 7.

Viburnum ellipticum, Hook. . . . . . *Pacific Black Haw*
Open woods about south base. Infrequent. No. 4533. May 27.

Symphoricarpa albus, (L.), Blake. . . . . . *Snowberry*
Common in open woods and on rocky slopes up to 2200 ft. No. 4673. July 19.

Lonicera ciliosa, (Pursh) Poir. . . . . . *Wild Honeysuckle*
Open woods, 1200 ft. Not uncommon. No. 4591. June 7.

VALERIANACEAE. . . . . VALERIAN FAMILY

Valerianella congesta, Lindl. . . . . . *Red Corn Salad*
Very common in open woods and on grassy slopes, 1200 ft. No. 4592. June 7. The rose-colored flowers are quite showy on the south slope of the mountain when in full bloom.

CAMPANULACEAE. . . . . BELLFLOWER FAMILY

Campanula rotundifolia, L. . . . . . *Harebell*
Grassy and rocky slopes 1400 ft. Infrequent. No. 4615. July 19.

Campanula Scouleri, Hook. . . . . . *Scouler's Bellflower*
Common in open woods at 600 ft. No. 4667. July 19. The slender, usually single stems, bear from 1 to 7 pale lavender-blue, drooping bell-shaped flowers.

COMPOSITAE. . . . . COMPOSITE FAMILY

Lapsana communis, L. . . . . . *Nipple-wort*

Roadsides and open woods about the south base. Infrequent. No. 5026. July 3. A roadside weed. Nat from Europe.

Madia racemosa, (Nutt.) T. & G. . . . . . *Gum-weed*

Open woods and rocky slopes about the south base. Rare here. Heads glandular viscid; flowers small, greenish yellow. No. 5027. July 3.

Antennaria Howellii, Greene . . . . . *Howell's Cat's-foot*

Common on rocky slopes 1400 ft. No. 4527. May 27.

Antennaria racemosa, Hook. . . . . . *Western Cat's-foot*

Grassy and rocky slopes, 1200 ft. No. 4524. May 27.

Adenocaulon bicolor, Hook. . . . . . *Downy-leaves. Silver-green*

Common in open woods about south base. June 7.

Eriophyllum lanatun (Pursh) Forbes . . . . *Woolly Golden Yarrow*

Common on gravelly slopes and in open woods about the south base. No. 4633. June 21.

Anthemis Cotula, L. . . . . . *Dog-fennel*

On roadsides and waste places about south base. Infrequent. A common weed. Introduced from Europe.

Chrysantemum leucanthemum pinnatifidum, Lecoq & Lamotte . *Oxeye Daisy*

Common on roadsides and in open places near the south base. June 7.

The showy white flowers are attractive but the plant is a troublesome weed in pastures, meadows and old fields. Nat. from Europe.

Achillea lanulosa, Nutt. . . . . . *Woolly Yarrow*

Common on roadsides and open spots about the south base. No. 4608. June 21. Flowers usually white but frequently pink.

Arnica amplexicaulis, Nutt. . . . . . *Water Arnica*

Moist, shady ravine, 2000 ft. Infrequent. No. 4670. July 19.

Arnica latifolia, Bong. . . . . . *Broad-leaved Arnica*

Moist woods and stream banks about south base. Infrequent. No. 4558. June 7.

Crocidium multicaule, Hook. . . . . . *Yellow Daisy*

Grassy slopes, 1200 ft. Not uncommon. No. 4523. May 27.

Senecio Harfordii, Greenman . . . . . *Harford's Ragwort*

Moist rocky slopes, 1400 ft. Not uncommon. No. 4506. May 27.

Senecio ochraceus, Piper . . . . . *White Squaw-weed*

Rocky slopes, 1600 ft. Not uncommon. No. 4529. May 27.

Cirsium edule, Nutt. . . . . . *Edible Thistle*

Moist open woods about south base. Infrequent. No. 4654. June 28.

Centaurea Cyanus, L. . . . . . *Bachelor's Button*

A handsome showy flower in fields, roadsides and waste places. Corollas blue, brown-red, purple, pink or whitish. First introduced into Oregon by a pioneer woman in 1848, this apparently harmless garden flower has become a troublesome weed in grain fields where it is known to farmers as "French Pink." Introduced from Europe.

Scorzonella laciniata, Nutt. . . . . . *Cut-leaved Scorzonella*
Rocky slopes, 1200 ft. Not uncommon. No. 4519. May 27.

Ptilocalais nutans, (Geyer) Greenm. . . . *Nodding Bristle-head*
Open rocky slopes, 1400 ft. Infrequent. No. 4500. June 7.

Sonchus arvensis, L. . . . . . *Field Sow Thistle*
Roadsides and open woods about south base. Infrequent. June 7.
A common weed. Nat. from Europe.

Agoseris retrorsa, (Benth.) Greene . . . . . *Lion-tooth Agoseris*
Not uncommon on grassy slopes near Rodney Falls. No. 4514.
May 2.

Hieracium longiberbe, Howell . . . . *Long-bearded Hawkweed*
On rocky slopes 1200 ft. Infrequent. No. 4499. May 27.

PORTLAND, OREGON, October, 1920.

□□□

The Squaw Mountain Trip

By HAROLD S. BABB

As Memorial Day fell on Sunday this year and was observed on Monday, an opportunity was given for a trip of two and a half days. The visit to Squaw Mountain was anticipated with much pleasure; the territory was new to the Mazamas as an organization, and there is perhaps nothing which adds zest to a trip as much as the sense of entering fresh fields. This circumstance, with the added inducement of its being the first extended trip after the confinement of the winter months, was responsible for the large attendance. A total of eighty-seven persons participated, including those who joined us on Sunday and Monday.

The main party left Portland on Saturday afternoon, May 29, 1920, by the Cazadero railway. We detrained at Faraday. Here there began, by way of introduction, a fairly steep climb out of the canyon of the Clackamas River. After having reached the more level country east of the river the walk during the rest of the afternoon was without appreciable gain in elevation. The ten miles to Bee Creek were covered in remarkably good time for such a large party.

A beautiful camp-site was found near an abandoned homestead. The main camp-fire was located in the center of a level open space surrounded by forest trees, which gave a feeling of protection. Several automobile parties joined us here. A dozen or more cook-fires quickly sprang up, glowing and sparkling among the trees in every direction, and the familiar business of making a snug camp for the night under a somewhat threatening sky was everywhere in progress.

After dinner there gathered one of the most irrepressible camp-fire circles known to Mazama memories. Perhaps the spirit of hilarity was an expression of the joy of returning to camp days once more—perhaps it was spring in the air—but at any rate, the usual orderly if unpremeditated procedure of conducting the evening's entertainment was out of the question, and enthusiasm had its way. There was no "owl session," however, as the thought of the fourteen miles to be covered on the morrow, to the top of the mountain and back, acted as a persuasive reminder of the human necessity of sleep.

We set out at seven in the morning on the Forest Service trail. Now we began a gradual climb which continued practically all the way to the summit. Our trail led us, mile after mile, through a forest of fir, with rhododendrons in great profusion. We soon encountered the first patches of snow. These increased in size and frequency, and during the latter half of the ascent the ground was seldom visible. Snow fell on us, too; five or six times during the day it came down thickly and quietly for a few minutes, only to be relieved each time by a burst of brilliant sunshine.

We lunched beside a stream a short distance below the summit. Meanwhile the mountain top, in full view, beckoned us upward, and after lunch and a short rest, we began the final ascent, skirting around the head of the valley on a curved ridge towards the top. The last effort was a steep snow climb.

The Forest Service lookout station on the summit shows an elevation of 4,791 feet above sea level. Those who preferred round numbers climbed the ladder at the rear of the cabin to an even 4,800 feet.

The weather was fickle that day. As we stood on the summit the sun would now and then suddenly appear, the clouds to the west would open up and reveal an impressive view down into the Willamette valley—a sunlit landscape with cloud shadows racing over it; then it would clear to the south, and just as we stood in eager expectation of catching a glimpse of Mt. Hood looming up in the northeast, down would come the clouds on us once more. For almost an hour the weather played this game of hide-and-seek with us. Finally, weary of being so hopelessly "it," we started reluctantly on our downward way, obliged to content ourselves with the leader's word that Mt. Hood stood in all his splendor just behind the clouds.

We reached camp in good time for dinner. The camp-fire session was very enjoyable, if less hilarious than the evening before, and this time the owls were free to make the most of their nocturnal proclivities.

Mt. Hood, from a point above Lost Lake.

Photograph by Boychuk, Berger Studio.

Lost Lake.

Photograph by Boychuk, Berger Studio.

Monday was bright and clear. The morning was spent by the more energetic in a game of baseball, for which the pasture of the old homestead furnished a setting,—"a diamond in the rough," as it were.

We broke camp after lunch, and walked the ten miles back to Faraday in the afternoon.

In spite of our disappointment in the view from the summit, and in the failure of the rhododendrons to be in bloom on schedule time, the outing was a memorable one. A trip well planned and executed cannot fail to be enjoyable, especially with such an enthusiastic attendance. In this instance Mr. Parker gave us the additional pleasure of introducing us to a new and interesting territory easily accessible from Portland.

□□□

Lost Lake

By Ella P. Roberts

Mazamas have explored pretty thoroughly the territory which can be reached in week-end trips, but on July 3, 4 and 5 of this year they visited a place hitherto unknown to them as an organization. Lost Lake, near the northwest base of Mt. Hood, was their objective.

The party left Portland on the morning of July 3 for Dee, Oregon, reached by rail via Hood River. From here a fourteen-mile walk took them into camp. A short stop was made on the way for strawberries at Collins' Knoll, and another one for lunch at a delightful spot on the west fork of Hood River. Camp was made near Gifford's Point, where the mountain is in full view.

On the morning of the Fourth, a flag was raised in honor of the day and several informal patriotic talks were given, after which the party scattered over the trails. There was an especial charm about the woods at this time, for the rhododendrons were in full bloom and the blossoms of the squaw-grass and other mountain flowers abounded.

At night the lake was even more beautiful than by day, as the moon was full and the sky perfectly clear. Each night the camp-fire session was held at the water's edge. On one of these occasions, Mr. Raymond Conway told the following legend of Lost Lake, which he had obtained from Mr. H. H. Riddell:

"Long ago there lived an Indian whose 'tamanawas,' or guardian spirit was a great bull elk. Under the guidance of the elk he became a mighty hunter, knowing the ways and haunts of all game, but in

obedience to his tamanawas, he killed only for food to satisfy his immediate needs.

"The other members of his tribe taunted him because he would not kill more than he could use. A pretended seer of the tribe announced that he had had a vision in which Woutulat, the god of the Indians, had announced to him that a long, hard winter was ahead. The impostor urged all hunters to kill as many animals as possible and to prepare the meat for the winter. The hunters vied with each other in their efforts, each seeking to become known as the greatest hunter of the tribe.

"Our young man finally yielded and went south along Hood River to about the present site of Dee, and there found five bands of elk. He killed all except one, his guardian elk, and that he wounded severely with an arrow. The wounded elk hurried away through the forest, and the young man followed its trail. The trail led him deeper and deeper into the mountains and finally took him to the shores of a beautiful lake. He found his elk lying in the water a short distance from the bank. He went into the lake to draw it ashore, but as soon as he touched it he and the elk both sank.

"When he touched the bottom of the lake, the hunter seemed to awake from a deep sleep and saw about him the spirits of innumerable bear, deer, and elk, now in human shape. All groaned, and a voice said, 'Draw him in.' Each time the voice spoke, he was drawn nearer to the great elk, his tamanawas, which he had wounded. At last he reached its side.

"Then the great elk spoke: 'Why did you not obey my commands? These are the spirits of those you have slain. I will no longer be your guardian spirit.' And the voice said: 'Cast him out,' and he was cast upon the shore of the lake.

"Slowly and wearily he dragged himself to the abode of his tribe. He took to his tepee, saying: 'I am sick. I have been in the abode of lost spirits. I have lost my tamanawas at the lake.' He then died. The lake was ever after known as 'The Lake of Lost Spirits.' Its waters, though clear and peaceful, are teeming with myriads of spirits of the departed, and Mt. Hood is reflected from the crystal deeps as an everlasting monument to mark the spot."

The famous reflection of Mt, Hood in the lake was the only thing lacking during the first two days, but at the dawn of the third day a few wakeful ones discovered that the reflection was perfect. Cameras were soon in readiness to catch it when the light was just right. The reflection remained in unmarred beauty until after eight o'clock, when most of the party bade a reluctant farewell to the lake.

The trip was planned and led by Miss Harriett E. Monroe and Miss Laura Peterson. They were assisted by Mr. Raymond Conway and by members of the U. S. Forest Service.

After returning from the trip interest in the lake still continued, and Mr. George H. Himes, of the Oregon Historical Society, was asked for information concerning early explorations. He gave it as follows:

"The first white men to see this lake, so far as known, were two brothers named Joe and John Diver. From information gained from them by Ezra L. Smith, of Hood River, a party of twelve men was organized in 1880 for the purpose of finding the lake, with Mr. Smith as leader. The names of the other members of the party were: Lyman Smith, William Smith, William Ferguson, Prof. L. F. Henderson (a botanist), M. D. Odell, William Hudson, Rev. T. L. Eliot, Christopher R. Eliot, Edward C. Eliot, Newton Clark and —— Pitts.

"On August 18, 1880, the party started in search of the wonderful lake of the beauty of which they had so often heard. The days were very smoky at the time, and all were about to abandon the search, when on the evening of the third day it was found.

"Rev. T. L. Eliot, one of the party, wrote an account of the discovery, which appeared in the *Oregonian* of August 27, 1880. He said:

" 'The trip was a very enjoyable one, and possesses great interest for those who relish camp life and fairly rough traveling. The forks of Hood River were too high for fording and were crossed by felling trees. The finest of trout were found in abundance, both in the river and lake. The lake is a beautiful piece of water, about four miles in circuit, of a triangular shape, very deep, and surrounded by the grandest forests of fir, white pine and hemlock. A small swamp is at the head and another at the outlet. Some rich lands are in the vicinity and on the line of march. Above the lake on the south is a hill from which a sublime view of Mt. Hood, six or eight miles distant, can be obtained. Profound canyons and lofty hills are surmounted by the glaciers and soaring summit, which on this side is almost a precipice of glittering snow and ice. The tracks of bear, elk and deer abound everywhere, and with dogs these animals could undoubtedly be soon found. The botanist of the party found the region very interesting. The wealth of timber everywhere is amazing even to an Oregonian. The party returned from the lake in a day and a half, a walk of about thirty miles, and felt under especial obligations to Mr. E. L. Smith, as leader, for the care taken of all arrangements and details of the week's excursion.'

"As the lake had never been named, the one given, 'Lost Lake,' was suggested. Owing to the smoke and some misunderstanding of routes, the party did not find it easily; and the old story, 'Indian not lost—wigwam lost,' furnished the basis for a name.

"I have sought in many ways to find an Indian name for this impressive body of water. Twenty years or more ago I asked a very old Indian at Oregon City if he knew a name for it. All I could get out of him was 'Ya-ka nem hy-ass ahn-kut-te; al-ta wake kum-tuks,' which, freely translated, would mean: 'That lake had a name a great while ago, but now it is forgotten.' "

□□□

Address *of the* Retiring President

E. C. Sammons

(*Delivered at the Annual Meeting held in the Club-rooms, October 4, 1920*)

Fellow Members:

It is with a considerable degree of enthusiasm and satisfaction that I contemplate our activities for the year now closed. In many ways it has been the most successful year the club has ever had, save possibly those epoch-making years of 1894-95-96. Some of our activities this year have been in keeping with the very best traditions of the club, which, as you know, has an enviable reputation built upon over a quarter of a century of service to the community.

The supreme event of the year, as measured by past precedents, was doubtless the ascent of Mt. Baker and Mt. Shuksan during the twenty-seventh annual outing, July 31 to August 16, inclusive, followed closely by the annual ascent of Mt. Hood, July 17-18. On all three of these climbs new climbing history was made, and I feel that it is with pardonable pride we refer to them at this time. Just as it was the Mazamas' good fortune to have been the first organization to climb Mt. Baker and Mt. Shuksan and explore the surrounding region in 1906, so it is our honor this year to have again made history. This year, however, it was not because of exploration or any noteworthy contributions to scientific knowledge, nor yet any brilliant individual exploits; it was rather the success of the climbing parties in the ascents of the two peaks in accomplishing in each instance what we are accustomed to call "a one hundred per cent climb." All the members who

attempted each climb gained the summit, a record unequalled before in our history.

Also, due to this year's efforts, the Mazamas can take credit for having placed there the largest party of persons that has ever reached the summit of Mt. Baker. On August 12 there stood on Baker's snowy dome forty-six persons, of whom twelve were women. This is the largest number of women that has ever been on the top of Mt. Baker.

Nor was the ascent of Mt. Shuksan less noteworthy. Twenty members of the party started from the permanent camp, and all twenty registered at the summit. Of this number four were women. This was only the fourth recorded ascent of the peak, and again there were more women in our party than in any previous expedition that reached the pinnacle. It is to the credit of our club that the first ascent of Mt. Shuksan was made by the Mazamas, in 1906.

The annual outing was a success from every angle. The weather was perfect, the climbing was record-making and without accident, and the camp life was unspoiled by either illness or disappointment. To the contrary, camp life was greatly enjoyed and permitted of that splendid *camaraderie* for which our camps have been noted. We went there as mere acquaintances from scattered points; we returned as one happy family, enriched mentally, morally, and spiritually, as well as physically, by our sojourn in God's great out-of-doors.

I would not have you believe that our activities were confined only to the annual outing. Nothing could be farther from the truth. On the annual ascent of Mt. Hood, held under the auspices of the Local Walks Committee, a new chapter was written in the mountaineering annals of the Pacific Northwest, for the Mazamas took one of the largest parties to the summit of the mountain that has ever stood there. There were 197 in the party which reached the summit on July 18. The largest party that had ever been there previously was during the Mazamas' ascent on July 4, 1915, 235 persons reaching the summit on that day. In this connection, let me urge that the annual ascent of Mt. Hood be made a permanent institution as a means of creating new interest in mountain-climbing, besides serving as a most fruitful source of new members for our club, which, principally through its size and the financial revenue resulting therefrom, alone can accomplish some of the things to which it aspires and which it should do to keep faith with its founders.

Another achievement to which we can point with pardonable pride is the construction of a trail along Tanner Creek from the end of the flume of the State Fish Hatchery at Bonneville, to Wahclella

Falls, perhaps better known as Tanner Creek Falls. Showing an unsurpassed enthusiasm for work, a large party of Mazamas built the trail, nearly a mile in length, in one day, May 16. Acknowledgment is here made to the United States Forest Service for valuable assistance in laying out the trail, and to the Oregon Fish and Game Commission for co-operation in granting the privilege and right of way for the trail.

In our local walks new fields have been explored, to the edification and enjoyment of many members who participated in the trips. One trip was to Squaw Mountain, staged over Memorial Day, and another to Lost Lake, over July 3-4-5. Both of these trips necessitated previous pioneering in country new to the Mazamas and both were well attended. I suggest that new fields be entered in this way whenever practicable, for in this way alone can interest be kept up among many of our older members, who in the course of years have been over most of the trails and roads near Portland and along the Columbia River, and therefore are not so much interested in repeating them as they would be inclined to make new trips.

Through an energetic and able Entertainment Committee we have had many functions which have tended to knit the membership more closely together. A few members have been inclined to criticize the dances and other apparent frivolities of some of our entertainments, but to those who do so, I would like to present the other side of the case. We are living in a new era. Every organization, be it social, technical, religious or athletic, holds the interest and enthusiasm of its members in these days mainly through social activities. And we are living in a rapid age. The reaction from the war and its attendant depression has for the time being directed the eyes and activities of the people to more excitable things than scientific and serious study; but I have no doubt that when the pendulum swings the other way and human nature is ready for it, the Mazamas will again be at the front in scientific study, exploration and literature. Further, let it be remembered that the present generation of Mazamas resurrected in 1911-12 the skeleton of the club which was then mouldering in the grave of inactivity, and, mainly by the establishment of local walks, the institution of an annual Mt. Hood climb, the opening of club-rooms, and sensible appeal to the social natures of a desirable class of people, revivified an organization which today stands second to none in the land in its line. If, in building an organization from 120 members in 1912 to over 572 paid-up members, in establishing club-rooms and maintaining them, in resuming the publication of a valuable magazine which fulfills what its aim has ever been, to be "a record of mountaineering in the Pacific Northwest," in furnishing exercise and enjoyment

to thousands of persons through local walks, and, last but not least, in building up a bank balance of over $5,500,—if, in all this, even though largely done through the medium of social activities, we have erred, then I am willing to assume my portion of the blame. I do not advocate our becoming a dancing or social club. Social activities should not dominate, nor do I believe that they ever will dominate. I feel that the club will ever remain true to its ideals. I do believe, however, that a certain degree of social activity is good for us as an organization.

While a series of educational lectures was not given during the past year, valuable work of an educational nature was nevertheless done by a committee which has assembled authoritative and valuable information concerning the history of Mt. Hood and of the activities of man in relation to it. It is to be hoped that this work will be continued and extended until we have at our club-rooms a complete and authentic record of all of our mountain peaks, streams and waterfalls, as well as our natural history and resources. This kind of labor, example and influence is bound to benefit our fellow-men in contributing to the sum of human knowledge.

The United States Forest Service has found to be of such practical value the slogans used during our local walks and other trips and published in our schedules, that they have utilized them throughout the Pacific Northwest. One of them is "Keep the forest alive and its camp-sites clean"; another, "A clean camp and a dead fire." I hope to see the time when the Mazamas will post their own signs with such mottoes and bearing the conventional goat's head, thereby contributing their part to the preservation of the beauties of nature with which we of the West are so graciously and abundantly endowed.

Three things peculiar to the Mazamas as a mountaineering organization have contributed to a wonderful spirit among the members. These are, first, the permanent base camps for annual outings, which bring our members into close acquaintance and permit the forming of strong friendships; second, the membership qualifications which make it mean something to belong to the club and assure a certain degree of active interest on the part of everybody who becomes a member; and last, but by no means least, spacious club-rooms which are attractive and more or less generally used by the members as a place to meet and plan trips or while away an idle moment. None of the other western mountaineering clubs have developed this club-room idea at all so broadly as the Mazamas, and I consider it a most valuable asset. Our activities will be still more encouraged when we establish a mountain lodge, which can become the rendezvous for week-end trips in both winter and summer. A Lodge Committee we

have already and many trips have been made by its members in endeavors to find a suitable location for a lodge. In fact, the membership as a whole was invited to inspect two proposed lodge sites on the Columbia River, near Cascade Locks, but no definite action has been taken towards acquiring a site or erecting a building. These questions will be left for a future Council to settle.

Largely due to the groundwork laid by our society, the spirit of mountaineering in the Pacific Northwest, and more especially in our own city of Portland, has shown a most remarkable growth. Hundreds of persons now annually climb the peaks visible from Portland where but a few score essayed the feat a few years back. So also has the love of tramping and knapsacking grown, and I think it is not immodest for us to claim a fair share of the credit for this added zest as being due to our example and the publicity attendant upon it. This leads me to urge all members of our club to be most careful about their conduct on the trails, in the mountains, and in the woods. Especially would I caution and implore them to leave clean camps and extinguish all fires. Apart from other reasons, it is to be remembered that as we are the pioneers in out-of-door recreation of our peculiar kind, it has become the custom of the public at large to associate persons in outing garb with the name Mazama, and I very much fear that we not only have credit for creating the enthusiasm that has sent people to the open air, but also get an unjust share of blame for inconsiderate acts of persons who tramp over our trails and camp where we have camped. By our example in camp conduct, let us prove by deed rather than by word that we should not be blamed for these acts. Let our own consciences be clear on that point.

Mazamas, now a few salient facts which I hope may be of interest. We entered this fiscal year with 465 members; we now have 572 members. Our trips this year have been financially successful. The Mt. Hood outing netted $316, and the annual outing to Mt. Baker netted $57. Our treasury now stands at $4,986, in addition to $650 in Liberty Bonds. We also have camp equipment, and the visible articles in these club-rooms, valued at $900. This equipment is now stored in a room adjoining these social club-rooms, all properly insured and ready for the call of next year's outing.

Our organization is now embarking upon another year of activities —its twenty-eighth year. Whether this year shall be one of progress and achievement is for you alone to say. By your interest and enthusiasm you can make this club what you will. It must have the untiring support of every member if it is to continue to advance and respond to the high ideals it has itself established. Its demands upon

members are small, both financially and physically, and I feel that so long as its membership is limited to those who have climbed to the summit of a mountain perpetually covered with snow, upon whose breast there is at least one living glacier, and to the summit of which one cannot ride on horseback or otherwise, just so long will the club meet its responsibilities and fulfill its obligations to those (not now of our membership) who conceived, nursed, and cherished the idea which bore fruit in this club which we so proudly call our own.

As president of this organization, I wish to acknowledge certain gifts from members, received during the year. Our dear friend Augustus High presented to the club this Rocky Mountain sheep head; and to E. C. Blackwood we are indebted for two beautiful photographs of Mt. Hood, one taken from Lost Lake during our first club trip to that region, and the other from a point south of Government Camp. It is interesting to note that Mr. Blackwood's picture is the only one which the club possesses of Mt. Hood from the south side. I wish also to acknowledge receipt of two beautiful pictures, the gifts of John R. Penland, of Albany, Oregon. It is to be hoped that some member will present the organization with the head of a real Mazama—a Rocky Mountain goat. Or, if an opportunity arises for the club to purchase one, I think that it should do so, as these club-rooms seem incompletely furnished without one.

And now, in conclusion, I wish to express my very sincere thanks to the members of the Executive Council for their loyal support and untiring zeal in behalf of our ideals. Never before have I served with so harmonious a group. Not one difference has marred our sessions and deliberations; never in all my experience has it been so pleasant to work with people and for an ideal. It is easy to succeed with such co-workers. I also wish to thank all the committee workers for their splendid unselfish service to the organization throughout the year, especially the members of the Outing and Local Walks committees. It has been to me a very great honor to occupy the office of president of the Mazamas, and I thank you one and all for the honor and privilege of serving the club which I so dearly love.

Report of the Certified Public Accountant Who Examined the Financial Affairs of the Mazamas

INCOME AND PROFIT & LOSS ACCOUNT

For the Period from October 7, 1919, to October 8, 1920

INCOME:		
Members' Dues	$1,734.00	
Life Memberships	100.00	$1,834.00
Miscellaneous:		
Interest on Liberty Bonds	20.00	
Interest on Savings Deposit	60.00	
Key Sales	12.00	
Sundry	2.50	94.50
Net Income from Committee Transactions:		
Income:		
Annual Outing—Mt. Baker	57.45	
Mt. Hood Outing	316.70	
Local Walks	122.98	
	$ 497.13	
Less:		
Loss on Magazine Publication	431.98	65.15
Gross Income		$1,993.65
EXPENSES:		
Club Room Rent	$ 480.00	
Telephone Service and Tolls	88.65	
Printing and Stationery—General	218.40	
Entertainment	56.60	
Associated Club Dues	15.00	
Insurance	13.08	
Furniture Repairing and Renovating	41.45	
Keys	12.00	
Sundry	82.86	1,008.04
Net Income		$ 985.61

BALANCE SHEET

As at October 8, 1920

Assets

Cash at Bank—General Fund	$1,926.59
Cash at Bank—Savings Account	3,060.00
United States Liberty Bonds	650.00
Club Room Furniture and Camp Equipment	900.00
	$6,536.59

Liabilities

Surplus	$6,536.59
	$6,536.59

Portland, Oregon, October 14, 1920.

To the Mazama Council,

Portland, Oregon.

In accordance with your instructions I have audited the accounts of the Mazamas for the fiscal year ended October 8, 1920, and present herewith my report. After meeting all expenses, the operations of the club for the period under review resulted in a net income of $985.61. Particulars are given in the accompanying Income and Profit & Loss Account. The Balance Sheet given on this page is a true statement of the financial condition of the club as at October 8, 1920.

The cash funds have been verified by certificates received from the bank. The United States Liberty Bonds were inspected and found to be filed for safe keeping in a safety deposit vault. The club room furniture and camp equipment is covered by insurance.

The accounts of the Treasurer and the various committees were examined and found to be in order.

Yours truly,

Robert F. Riseling,

Certified Public Accountant.

Report of Local Walks Committee

Portland, Oregon, September 29, 1920.

To the Mazama Council:

The Local Walks Committee respectfully submits the following report covering its activities from October 17, 1919, to date hereof:

Date of Trip	*Trip*	*No. Present*	*Leader*	*Receipts*
1919				
Oct. 4-5	Table Mountain	28	E. C. Sammons	$2.80
Oct. 11-12	Larch Mountain	..	George X. Riddell	3.50
Oct. 17-19	Hamilton Mountain	60	W. W. Evans	2.85
Oct. 26	Angel's Rest	26	Mary Gene Smith	
Nov. 2	Eagle Creek-Estacada	18	M. R. Heinze	.90
Nov. 8	St. Peter's Dome	35	T. R. Conway	1.70
Nov. 16	Bull Run-Aims	58	H. L. Wolbers	2.90
Nov. 23	Oswego-Portland	72	J. Homer Clark	3.60
Nov. 30	Paper Chase	29	Harriett E. Monroe	1.45
Dec. 7	Happy Hollow	49	Ben W. Newell	2.45
Dec. 14	Mystery Trip	15	C. M. Dowling	.75
Dec. 14	Extra	40	E. F. Peterson	1.60
Dec. 21	Dundee	80	Crissie C. Young	3.50
Dec. 28	Garden Home	23	W. A. Gilmour	1.15
1920				
Jan. 4	Oswego	45	J. Homer Clark	2.25
Jan. 11	Vancouver	37	Gertrude Williams	1.85
Jan. 17-18	Aschoff's	102	Entertainment Com.	8.70
Jan. 25	Macleay Park	17	A. Boyd Williams	.75
Feb. 1	Tualatin-Willamette	40	D. T. Kerr	2.00
Feb. 2	Moonlight Walk	41	Lena Sherman	2.05
Feb. 8	Larch Mountain	21	T. R. Conway	2.15
Feb. 8	Park Rose-Columbia River	41	J. I. Teesdale	2.05
Feb. 15	Anderson-Sycamore	60	Committee	6.20
Feb. 22	Sky Line Trail	75	Committee	3.75
Feb. 29	Camas-Vancouver	72	May Chenoweth	6.96
Mar. 6-7	Larch Mountain	64	Committee	12.85
Mar. 14	Mt. Talbot-Gladstone	45	Dean Van Zandt	2.25
Mar. 21	Burlington-Cornelius Gap	53	Eric Bjorklund	5.10
Mar. 28	Sycamore-Clackamas	42	Helen Hollister	4.25
April 2	Moonlight Walk	..	Alice Barringer	
April 4	Riverview-Palatine Hill	..	George Bissell	.50
April 11	Linnton-Germantown	60	W. J. Paeth	6.00
April 18	Lodge Site	85	Lodge Committee	8.00
April 25	Boring-Bull Run	55	Alfred F. Parker	5.50
April 30	Moonlight Walk	26	H. L. Wolbers	2.60
May 2	Latourell Falls	85	C. E. Warner	8.10
May 9	Rocky Point-Scappoose	62	Frank M. Redman	5.90
May 23	Archer Mountain	50	R. W. Ayer	6.00
May 29-31	Squaw Mountain	87	Jamieson Parker	20.10
May 30	Hillside Drive	13	Cecil Pendleton	1.30

Date of Trip 1920	*Trip*	*No. Present*	*Leader*	*Receipts*
June 2	Moonlight Walk	58	Bernice J. Gardner Martha Landis	2.90
June 5-6	Yeon Mountain	29	T. R. Conway	5.80
June 12-13	Sherwood-Chehalem Mountain	40	Harold S. Babb	6.50
June 19-20	Estacada-Clackamas River	28	Marion Schneider	5.60
June 25	Cedar Mills	..	B. C. Nelson Adrian Smith	2.50
June 30	Moonlight Walk	20	W. P. Forman	1.00
July 3-5	Lost Lake	87	Harriett E. Monroe Laura Peterson	27.64
July 3-5	Dowling Farm	4	.....	.....
July 25	Picnic, Baker's Bridge	110	Entertainment Com.	8.60
Aug. 1	Picnic, Fairview	..	Committee	1.00
Aug. 8	Oswego Lake	..	Committee	4.00
Aug. 15	Fairview	..	W. W. Evans	1.90
Aug. 22	Willamette	..	Committee	2.00
Aug. 29	Fairview	..	Committee	1.00
Sept. 3-5	Neah-kah-nie	75	Committee	15.20
Sept. 12	Sauvie's Island	11	J. I. Teesdale	.90
Sept. 19	Barlow	40	E. F. Peterson	4.65
Sept. 26	Aschoff's	16	W. J. Paeth	.85
	Total Receipts			$248.55

DISBURSEMENTS

Oct. 16, 1919.	Typing Report	$ 1.35
Nov. 5, 1919.	Korradi Printing Co.—Printing Schedules	27.35
Jan. 26, 1920.	Jones Mercantile Co.—Provisions	18.14
Jan. 17, 1920.	Entertainment Committee—Equipment	2.95
May 24, 1920.	Jones Mercantile Co.—Provisions	12.80
May 27, 1920.	Jones Mercantile Co.—Provisions	24.94
May 20, 1920.	P. D. Cunningham Co.—Stationery	.75
July 1920.	Backus & Morris—Baseball	2.00
Sept. 4, 1920.	J. K. Gill Co.—Books for Mt. Adams and Mt. Hood	2.60
Sept. 1920.	U. S. Postal Dept.—Envelopes	12.52
Sept. 1920.	Jones Mercantile Company—Provisions	17.62
Sept. 1920.	People's Market—Provisions	2.55
	Total Expenditures	$125.57
	Balance	$122.98

Respectfully submitted.

EUGENE H. DOWLING, *Chairman.*

Mazama Organization for the Year
1920-21

President.....A. Boyd Williams
Vice-President.....LeRoy E. Anderson
Corresponding Secretary.....Alfred F. Parker
Recording Secretary.....Laura H. Peterson
Financial Secretary.....Martha E. Nilsson
Treasurer.....Harry L. Wolbers
Historian.....Lola I. Creighton
Chairman Outing Committee.....Roy W. Ayer
Chairman Local Walks Committee.....Eugene H. Dowling

COMMITTEES

Outing Committee—Roy W. Ayer, Chairman; Charles J. Merten, Martha E. Nilsson.

Local Walks Committee—Eugene H. Dowling, Chairman; W. J. Paeth, Harold S. Babb, Helen Hermann, Crissie C. Young.

Membership Committee—Harry L. Wolbers, Chairman; Roy W. Ayer, Eugene H. Dowling.

Publication Committee—Jamieson Parker, Chairman; Alfred F. Parker, B. A. Thaxter, S. M. Fries.

Library Committee—Lola I. Creighton, Chairman; LeRoy E. Anderson, Beulah Miller Carl, Harry C. Libby, Florence McNeil.

House Committee—Cecil M. Pendleton, Chairman; E. F. Peterson, Mary Powell, Martha Landis, Katherine Schneider.

Educational Committee—B. A. Thaxter, Chairman; M. W. Gorman, Ella P. Roberts, J. E. Bronaugh, Jean Richardson.

Entertainment Committee—Jamieson Parker, Chairman; T. R. Conway, R. A. Perry, Alice Banfield, Adrian Smith.

Auditing Committee—R. F. Riseling, Chairman; Elsie Silver, Jacques Letz.

Trails Committee—C. J. Buck, Chairman; D. V. Stroop, Arthur D. Platt.

Publicity Committee—Henrietta McKaughan, Chairman; E. C. Sammons, Margaret A. Griffin.

Membership Promotion Committee—Mary Knapp Lee, Chairman; Gertrude Williams, W. P. Forman.

Scouting Committee—R. H. Bunnage, Chairman; Eric La Made, Dean Van Zandt, Carl H. Sakrison.

Book Reviews

"Mountain Memories—A Pilgrimage of Romance."

Here is a book full of the lure of the mountains, written by one of England's most famous mountaineers. For thirty seasons the author went up and down among the mountains of the earth, now making his initial climb in the Alps, now listening to the call of the East and exploring the high Himalayas; now making an expedition to the polar snows of Spitzbergen. Again we find him climbing peaks in the Andes or wandering over the uplands of Tierra del Fuego, but always returning to his beloved Alps, many of whose great peaks he climbed over and over again.

"Mountain Memories" is a delightful book. The author has the happy faculty of taking the reader with him into little-known parts of the world as well as up peaks familiar to every schoolboy, and making him see the glories of God's great out-of-doors. Few climbers have achieved as much as he. He has stood on the summit of more peaks than most of us have ever seen or even read about, and the fascinating accounts of these climbs and the scenes he depicts linger long in our memories. He is not only a traveler, a climber, a scientist, but a poet and artist as well, and there radiates from his pages a most delightful philosophy fully as charming as the scenes he describes or the pictures he paints.

"Mountain Memories" makes you live over again your own experiences in the mountains, even though your travels in the high places of the world may seem very insignificant when compared with Sir Martin Conway's.

B. A. Thaxter.

Sir Martin Conway, M. P., Ex.-Pres. Alpine Club, etc. *Mountain Memories—A Pilgrimage of Romance.* Funk & Wagnalls. 1920.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"What To See In America."

This is an attempt to cover, in a single volume, everything worth visiting in the United States. Each of the States has a chapter, into which the author has packed a brief history of the State, descriptions of its principal points of interest, and a mass of general information concerning it, including such matters as the first settlement, capital, largest city, highest point, industries, and general topography. To get so much material into an average of a dozen pages the author has had to adopt an extremely concise style, frequently at the expense of readableness. Much of the book sounds like a gazetteer and in most compressed chapters the effect is so scrappy that the reader will sympathize with the man who read the dictionary straight through.

The chapters on the older States are concerned largely with historical matter, some of it so generally known as hardly to be worth recounting, but much of it decidedly interesting. When he comes to the newer States the author is less concise, and in general achieves a happier result. Throughout the book, however, its real value lies in the illustrations. There are some five hundred of these, and they are remarkably well chosen. The reader will get a good deal of more or less useful information from the text, but it is from this truly remarkable collection of photographs that he will catch something of the characteristic flavor of each section of our marvelously varied country.

Arthur D. Platt.

Clifton Johnson. *What to See in America.* Macmillan. 1919. $3.00.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"The Adventures of a Nature Guide." This is a delightful collection of short sketches by a lover of nature and an intimate friend of all the wild creatures of the woods and mountains. They are written with a sincerity and simplicity in keeping with the subject and make one long to be a child in the author's "Trail School," to watch with him the wild folk at play.

His "Censored Natural History News" is especially good. It tells and shows the absurdity of certain popular superstitions regarding the habits of wild animals.

May the time come when every National Park will have its nature guides, helping those who seek the joy of life in the open to see and understand the wonders about them.

Ella P. Roberts.

Enos A. Mills. *The Adventures of a Nature Guide.* Doubleday, Page. 1920.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"Going Afoot." This is an interesting little volume of practical instruction and advice on how, when, and where to walk. Several of the well-known walking and mountaineering clubs of North America are described, and a synopsis is given of the history and activities of each. One chapter is devoted to suggestions for the organization and operation of such clubs where none now exist. A bibliography of walking is appended, with special reference to the various sections of the United States.

While not of particular value to the experienced walker or woodsman, this book will be useful to the novice or to anybody interested in organizing a walking club.

Alfred F. Parker.

Bayard H. Christy. *Going Afoot, a Book on Walking.* Association Press. 1920.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"Winter Sports Verse." This volume of poems was compiled "for men and women who love the hardy, outdoor winter sports so well that they would welcome a collection of winter sports verses." These poems are written by people who speak with the vigor and enthusiasm engendered by the invigorating sports of winter. Some of the verses are humble and lacking in real poetic value, but so full of genuine appreciation of the joyous sports described that they bring to mind many reminiscences of similar good times, and make those of us who live in an almost snowless region long for an opportunity to skate or ski at some place nearer than Mt. Hood. This anthology is an interesting addition to any collection of out-door verse and should appeal to all who enjoy active, zestful good times in the bracing air of winter.

Beulah M. Carl.

William Haynes and Joseph Leroy Harrison. *Winter Sports Verse.* With an introduction by Walter Prichard Eaton. Duffield. 1919. $1.50.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"A Tour of America's National Parks." A tourist contemplating a trip to include the circuit of the nine National Parks of the West will find this book of assistance in planning his itinerary. Not *all* the National Parks are included, as might be inferred from the title. There is much useful information regarding railroad connections, hotels, points of interest, etc., with references to side-trips worth making along the way. The illustrations are inadequate; for instance, in the chapter on Mt. Rainier National Park, there are but two pictures,—both rather small photographs of forest scenes. The book

is not carefully written. Spelling such as "Mt. Lassens" and "Gibralter," the statement which includes Mt. St. Helens and Mt. Lassen among volcanoes "approaching 14,000 feet in height," and the assertion that "Yellowstone Lake is the highest body of water of its size in the world," are inexcusable errors in a work of this kind, in which the first and last requisite is geographical accuracy.

JAMIESON PARKER.

HENRY OTTRIDGE REIK. *A Tour of America's National Parks.* Dutton. 1920. $4.00. (Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"USEFUL WILD PLANTS OF THE UNITED STATES AND CANADA."

In these days of expensive living and unscrupulous profiteering, it is a delightful treat to read this charming volume, and learn how well and efficiently the Indians of North America not only solved the food problem, but supplied themselves with beverages, salt, soap, medicines, dye-stuffs, tobacco, candles, and fibre materials.

This book is one of those of which we cannot speak too highly, and our only regret is that the space at our disposal is too limited to permit a fuller description of the work and its merits. Suffice it to say that no other volume, of which we are cognizant, supplies the wealth of information on the subject that is contained within its 275 pages. The author refers in all to some 258 species, of which 85 are to be found in Oregon,—giving both scientific and common names, and still further enhancing the value of the work for scientist and layman alike by including 81 line engravings and 20 photographic illustrations of the plants referred to.

The uses of the various species are treated under the following sub-heads: Foods, beverages, soap-plants, medicines, fibres, dyes, tobacco admixtures, salt substitutes, candle material and poisonous plants. The methods of collecting, preparing, and using, the habitat of the various species, and in many instances their scientific food value, are clearly and concisely described.

A good regional and general index enables the reader to refer readily to any species in which he is interested, or concerning which he requires detailed information.

It is evident that the author has never visited the Pacific Northwest or Alaska, as the following, among other well-known useful wild plants are not mentioned:

FOOD PLANTS—Tsuga heterophylla, Fritillaria camtschatcense, Fritillaria lanceolata, Calochortus macrocarpus, Quercus Garryana, Polygonum bistortoides, Berberis nervosa, Amelanchier florida, Amelanchier Cusickii, Osmaronia cerasiformis, Prunus subcordata, Hedysarum boreale, Lepargyrea canadensis, Carum oreganum, Heracleum lanatum, Cornus canadensis, Ledum glandulosum.

MEDICINAL PLANTS—Lycopodium Selago (this plant is also used for somewhat the same purposes as Lophophora Williamsii), Picea sitchensis, Veratrum californicum, Veratrum viride.

INDUSTRIAL PLANTS—Picea sitchensis, Thuja plicata, Xerophyllum tenax.

DYE PLANTS—Solidago canadensis, Solidago elongata, Euthamia occidentalis.

SALT SUBSTITUTE—Rhodymenia palmata (also used as a demulcent in coughs and colds).

POISONOUS PLANTS—Ciuta Douglasii.

The fronds of Rhodymenia, the inner bark of Tsuga and the ripe fruit of Lepargyrea are pressed into cakes and from time immemorial to the present day these various cakes constitute staple articles of barter among the Indian tribes of Alaska and British Columbia. The Lepargyrea cakes are the last dish served at the native feasts or potlatches and are regarded as the *piece de resistance* of these important social functions.

When the time arrives for a second edition, it is earnestly to be wished that these latter species will be included, as the day is not far distant when the descendants of the hardy, resourceful, early tribes will know no more about the aboriginal food plants, their preparation and uses, than the white man.

M. W. GORMAN.

CHARLES FRANCIS SAUNDERS. *Useful Wild Plants of the United States and Canada.* Robert M. McBride & Co., New York. 1920. $3.00.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

THEY AND WE

With stormy joy, from height on height,
The thundering torrents leap.
The mountain tops, with still delight,
Their great inaction keep.
Man only, irked by calm, and rent
By each emotion's throes,
Neither in passion finds content,
Nor finds it in repose.

—*Sir William Watson.*

Membership

Address is Portland, Oregon, Unless Otherwise Designated

ACTON, HARRY W., 519 W. 121st St., New York, N. Y.
ACTON, MRS. HARRY W., 519 W. 121st St., New York, N. Y.
ADAMS, RICHARD, 480 E. 24th St. N.
ADAMS, W. CLAUDE, 1208 Selling Bldg.
AITCHISON, CLYDE B., Interstate Commerce Commission, Washington, D. C.
AKIN, OTIS F., 919 Corbett Bldg.
ALLPHIN, WILLARD, 734 Hoyt St.
ALMY, LOUISA, P. O. Box 426, Dillon, Mont.
AMOS, WM. F., 1016 Selling Bldg.
ANDERSON, LEROY E., Federal Telegraph Co.
ANDERSON, WM. H., 4464 Fremont Ave., Seattle, Wash.
ANDRAE, GERTRUDE ELOISE, 206 E. 71st St.
APPLEGATE, ELMER I., Klamath Falls, Ore.
ASCHOFF, ADOLPH, Marmot, Ore.
ASCHOFF, OTTO, Linnton, Ore.
ATKINSON, R. H., 422 Oregon Bldg.
ATLAS, CHAS. E., 1955 Park Grove Ave., Los Angeles, Cal.
AVERILL, MARTHA M., 1144 Hawthorne Ave.
AYER, ROY W., 689 Everett St.
AYER, LEROY JR., P. O. Box 88, Crawfordsville, Ore.
BABB, HAROLD S., 583 Miller Ave.
BACKUS, LOUISE, 122 E. 16th St.
BAILEY, A. A. JR., 644 E. Ash St.
BAILEY, LAURENCE D., 1110 Yeon Bldg.
BAILEY, VERNON, 1834 Kalorama Ave., Washington, D. C.
BALLOU, O. B., 80 Broadway.
BALMANNO, JACK H., Multnomah, Ore.
BALOGH, W. A., 125 6th St.
BANFIELD, ALICE, 570 E. Ash St.
BARCK, CARL, 205 Humboldt Bldg., St. Louis, Mo.
BARLOW, RUTH, 670 E. Broadway.
BARNES, E. L., 658 Schuyler St.
BARRIGAR, MAUDE, Kiowa, Kan.
BARRINGER, ALICE, 415 10th St.
BATES, MYRTLE, 282 Park St.
BEATTIE, BYRON J., 830 Rodney Ave.
BELL, HALLIE, Carlton Hotel.
BENEDICT, LEE, 185 E. 87th St. N.
BENEDICT, MAE, 185 E. 87th St. N.
BENTALL, MAURICE, Gen. Del., Hathaway, Mont.
BIDWELL, EDMUND, 701 Corbett Bldg.
BIGGS, ROSCOE G., 284 E. 6th St. N.
BISSELL, EDWARD G., 223 W. Emerson St.
BISSELL, GEO. W., 223 W. Emerson St.
BJORKLUND, ERIC, 711 E. Flanders St.
BLACKINTON, PAULINE, Wellington Hotel, San Francisco, Cal.
BLAKNEY, C. E., R. F. D. 2, Box 151, Milwaukie, Ore.
BLAKNEY, EDITH, R. F. D. 2, Box 151, Milwaukie, Ore.
BLACKWOOD, E. C., 386 Morrison St.
BLUE, WALTER, 1306 E. 32nd St. N.
BLUMENAUER, FLORENCE, 1133 Rodney Ave.
BLUST, EDWARD L. 827 Gantenbein Ave.
BONNEAU, JOE C., 869 Garfield Ave.
BOWERS, NATHAN A., 501 Rialto Bldg., San Francisco, Cal.
BOWIE, MARGARET, 361 11th St.
BOYCE, EDWARD, 207 St. Clair St.
BOYCHUK, WALTER, 166 Nebraska St.
BRENIMAN, MARIE L., 151 Schiele Ave. San Jose, Cal.
BRENNAN, THERESA, 265 14th St.
BREWSTER, WM. L., 1022 Gasco Bldg.
BROCKMANN, G., 280 Benton St.
BRONAUGH, GEORGE, 350 N. 32nd St.
BRONAUGH, JERRY ENGLAND, Gasco Bldg.
BROWN, ALBERT S., 676 Riverside Drive, New York, N. Y.
BROWN, E. A., 195 6th St.
BROWN, EYLER, 1021 Chamber of Commerce Bldg.
BROWN, G. T., 500 E. Morrison St.
BROWNELL, DOROTHY S., 224 E. 15th St.
BRUNELL, EVA., 18 Abbott St., Worcester, Mass.
BUCK, C. J., 549 E. 39th St. N.
BULLIVANT, ANNA, 269 13th St.
BUNNAGE, R. H., 696 Sherrett Ave.
BURCE, JESSIE M., 181 Rutland Ter.
BURGLUND, E. E., 452 Morrison St.
BURNS, MRS. AGNES PLUMMER, Box 106, Troy, Wallowa County, Ore.
BUSE, W. F., P. O. Box 198, Linnton, Ore.
BUSH, FRANK H., 765 Alameda Drive.
BUSH, J. C., 683½ E. Morrison St.
CAHALIN, JOHN F., Northwestern Bank Bldg.

CALHOUN, MRS. HARRIET S., 367 E. 34th St.
CALLWELL, CHARLOTTE, 309 San Rafael St.
CALVERLEY, GEO. E., Oregon City, Ore.
CALVERLEY, ROBERT V., Oregon City, Ore.
CAMPBELL, DAVID, 654 Everett St.
CAMPBELL, GRACE, 600 E. 50th St. N.
CAMPBELL, P. L., 1170 13th Ave. E., Eugene, Ore.
CARL, MRS. BEULAH MILLER, 1172 Minnesota Ave.
CARLOS, CLYDE E., 1355 Sandy Blvd.
CARY, N. LEROY, U. S. Forest Service.
CASE, GEORGENE M., 3700 California St., San Francisco, Cal.
CATCHING, EVA, Hotel Carlton.
CHAMBERS, MARY H., 729 11th Ave. E., Eugene, Ore.
CHAMBERLAIN, RUTH, 265 14th St.
CHASE, ETHYL P., Foot of Miles St.
CHASE, J. WESTON, 506 Gasco Bldg.
CHENOWETH, MAY, 104 E. 24th St. N.
CHRISTIANSON, WM. D., 134 Colburn St., Brantford, Ontario.
CHURCHILL, ARTHUR M., 1229 Northwestern Bank Bldg.
CLARK, F. N., 305 Spalding Bldg.
CLARK, J. HOMER, 92 Front St.
CLARKE, AURIL KEELER, 72 W. Jessup St.
CLARKE, HENRY B., 253 6th St.
CLARKE, WARREN G., 72 W. Jessup St.
CLODFELTER, VIVIAN LUCILLE, 1221 E. Madison St.,
COLBORN, MRS. AVIS EDWARDS, Clovis, New Mexico.
COLLINS, W. G., 510 32nd Ave. S. Seattle, Wash.
COLPITTS, MARGUERITE, 262 Park St.
CONWAY, T. RAYMOND, 1721 E. Yamhill St.
COOK, VERA E., 1798 Woolsey St.
CORNING, H. I., 255 Cherry St.
COURSEN, EDGAR E., 658 Lovejoy St.
*COVILLE, F.V., Dept. of Agriculture, Washington, D. C.
COWPERTHWAITE, JULIA, Station E.
CREIGHTON, LOLA I., 920 E. Everett St.
CROUT, NELLE C., 1326 E. Tillamook St.
CRUMB, CLAUDE E., Y. M. C. A.
CURRIER, GEO. H., P. O. Box 526, Phoenix, Ariz.
*CURTIS, EDWARD S., 614 2nd Ave., Seattle, Wash.
CUSHING, MILDRED, 41 Rose Friend Apts.
CUSHMAN, CLYDE H., 1019 E. 13th St. N.
CUTTING, RUTH M., 240 E. 16th St.
DAVIDSON, EARL N., 4711 88th St. S. E.
*DAVIDSON, GEO., 530 California St., San Francisco, Cal.
DAVIDSON, R. J., 701 E. 60th St. N.
DAWSON, EDGAR, Cloyne Court, Berkeley, Cal.
DAY, BESSIE, 690 Olive St., Eugene, Ore.
DELACY, BEATRICE, 7 Buena Vista Park, Cambridge, Mass.
*DILLER, JOSEPH S., U. S. Geological Survey, Washington, D. C.
DILLINGER, MRS. C. E., 547 E. 39th St.
DONALD, KATHRYN, 921 Beaverton Ave.
DORMAN, MRS. H. B., Box 931, Leavenworth, Wash.
DOWLING, MRS. COLISTA M., 742 Belmont St.
DOWLING, EUGENE H., 742 Belmont St.
DRACK, MRS. ELSIE F., Radisson Hotel, Seattle, Wash.
DUDLEY, ALEXANDER P., 1240 E. 30th St. N.
DUDLEY, MRS. ALEXANDER P., 1240 E. 30th St. N.
DUFFY, MARGARET C., 467 E. 12th St.
DYER, R. L., 607 Securities Bldg., Seattle, Wash.
EASTON, CHAS. F., 209 W. Holly St., Bellingham, Wash.
EDGAR, JOHN R., Dee, Ore.
EDWARDS, ALICE L., Women's Bldg., University of Illinois, Urbana, Ill.
EMMRICH, ARTHUR J., 690 E. 67th St. N.
ENGLISH, NELSON, 148 5th St.
ERREN, H. W., 285 Ross St.
ESTES, MARGARET P., 692 E. 43d St. N.
EVANS, WM. W., Route 1, Hillsdale, Ore.
EVANS, MRS. WM. W., Route 1, Hillsdale, Ore.
EVERSON, F. L., 211 Ry. Ex. Bldg.
FAGSTAD, THOR, Junction City, Ore.
FALLMAN, NINA A., 301 W. Park St.
FARRAH, DONALD, 700 E. 26th St., Vancouver, Wash.
FARRELL, THOS. G., 328 E. 25th St.
FARRELLY, JANE, 1072 E. 29th St. N.
FETY, TOMINE, 247 Grant St.
FILLOON, R. M., Silverton Ranger Station, Silverton, Wash.
FINLEY, IRENE, 651 E. Madison St.
FINLEY, WM. L., 651 E. Madison St.
FISH, ELMA, 259 E. 46th St.

FITZ, ELIZABETH, Madison Park Apts.
FLANNIGAN, WALTER S., care Fleischner, Mayer & Co.
FLEMING, M. A., P. O. Box 479.
FOGDERUD, SENORA C., No. 3, Vancouver Barracks, Wash.
FORD, G. L., 1101 E. 19th St. N.
FORDYCE, C. P., 1701 Stone St., Falls City, Neb.
FORMAN, W. P., 128 N. 18th St.
FORSYTH, JAMES R., 1028 Williams Ave.
FOSTER, FORREST L., 354 E. 49th St.
FOSTER, W. C., 224 Glenn Ave.
FRANKLIN, F. G., Willamette University, Salem, Ore.
FRANING, ELEANOR, 1119 N. Broad St., Galesburg, Ill.
FRAZER, KENNETH F., P. O. Box 416.
FREED, H. A., 697 Marshall St.
FREEMAN, ETHEL, 3313 Van Buren St., Chicago, Ill.
FRENCH, S. H. J., Campbell Hotel.
FRIES, S. M., 691 Flanders St.
FRITSCH, LOUIS, 283 13th St.
FRENCH, BOYD, 714 W. 13th St., Vancouver, Wash.
FROST, BEULAH, 301 W. Park St.
FULLER, MARGARET E., 1873 E. Salmon St.
GARDNER, BERNICE J., 33 Knickerbocker Apts.
GARDNER, MRS. VESEY W., P. O. Box 2, Hillsboro, Ore.
GASCH, MARTHA M., 9 E. 15th St. N.
GILBERT, HAROLD S., 384 Yamhill St.
GILBERTSON, MARTHA, 567½ Glisan St.
GILE, ELEANOR, 622 Kearney St.
GILMOUR, W. A., Title & Trust Bldg.
GIRSBERGER, MABEL R., care Modoc Lumber Co., Chiloquin, Ore.
GLEYRE, MRS. ELSIE M., 512 Clay St.
GLISAN, RODNEY L., 612 Spalding Bldg.
GOLDAPP, MARTHA OLGA, 454 Mason St.
GOLDSTEIN, MAX, 575 3rd St.
GOOSMAN, GENEVIEVE M., 504 Imperial Arms.
**GORMAN, M. W., Forestry Bldg.
GRAF, S. H., 2260 Monroe St., Corvallis, Ore.
GRASSL, MRS. CHAS. W., 547 E. 39th St.
GRAVES, HENRY S., 3454 Newark St., Washington, D. C.
*GREELEY, GEN. A. W., Center Conway, N. H.
GRENFELL, MRS. WILLIAM RICHARD, 221 E. 21st St. N.
GRIFFIN, MARGARET A., 814 Spalding Bldg.
GRIFFITH, B. W., 417 Boyd St., Los Angeles, Cal.
GRUENNERT, ESTHER C., No. 3 Vancouver Barracks, Wash.
HAFFENDEN, A. S., 4236 49th Ave. S.E.
HALL, HARRY B., 153 E. 75th St. N.
HALL, HOWARD B., care Inman, Poulsen & Co.
HALL, MRS. HOWARD B., 407 E. 53d St.
HALSEY, ELIZABETH, Wellesley College, Wellesley, Mass.
HAMILTON, STACY, Electric Bldg.
HANCOCK, A. W., 1825 E. Flanders St.
HANSEN, BESSIE L., 577 Kerby St.
HANSEN, RUTH E., 577 Kerby St.
HARDESTY, WM. P., O'Kane Bldg., Bend, Ore.
HARDINGHAUS, EVELYN, 1026 Beulah Vista St.
HARLAN, EDWARD G., Y. M. C. A.
HARPER, IRA H., 2801 H St., Vancouver, Wash.
HARPER, MRS. IRA H., 2801 H St., Vancouver, Wash.
HARRIS, ELEANOR, 773 Overton St.
HARROUN, NORMAN, Lenox Hotel.
HART, E. NENE, 409 E. 15th St., Vancouver, Wash.
HARTNESS, GEORGE, 671 Clackamas St.
HARVEY, GEORGE H., JR., 3120 W. 23d Ave., Denver, Colo.
HARZA, L. F., Room 915, 115 S. Dearborn St., Chicago, Ill.
HAWKINS, E. R., 501 Wells Fargo Bldg.
HAZARD, JOSEPH T., P. O. Box 234, Seattle, Wash.
HAZEN, TODD, 602 Wilcox Bldg.
HAYHURST, C. W., 240 Stark St.
HEATH, MINNIE R., 665 Everett St.
HEDENE, PAUL F., 720 E. 22nd St. N.
HEINZE, AMY A., 261 14th St.
HELM, JEAN, 166 E. 29th St. N.
HELSBY, B., High St., Oregon City, Ore.
HEMPY, M. RAYMOND, M. A. A. C.
HENDERSON, G. P., 1087 Belmont St.
HENDRICKSON, J. HUNT, 610 Spalding Bldg.
HENKEL, FRED C., 273 Graham Ave.
HENRY, E. G., Newberg, Ore.
HENTHORNE, MARY C., 1834 E. Morrison St.
HERMANN, HELEN M., 965 Kerby St.
HERREN, PAUL A., 636 E. 17th St. N.
HEYER, A. L., JR., 304 Pacific Bldg., Vancouver, B. C.
HIGH, AUGUSTUS, 1171 Belmont St.
HILTON, FRANK H., 426 Northwestern Bank Bldg.

HIMES, GEO. H., Oregon Historical Society.
HINE, A. R., 955 E. Taylor St.
HODGSON, CASPAR W., Rockland Ave., Park Hill, Yonkers, N. Y.
HOFF, CLARICE L., 5804 15th St. N.E., Seattle, Wash.
HOGAN, CLARENCE, 591 Borthwick St.
HOLCOMBE. GLENNA, 285 Benton St.
HOLDEN, JAMES E., 1652 Alameda Dr.
HOLLISTER, HELEN, 550 E. Main St.
HOLMAN, F. C., 558 Lincoln Ave., Palo Alto, Cal.
HOLMES, EDWIN L., 598½ Salmon St.
HOPKINS, FRANCES, 541 Umatilla St.
HORN, C. L., Wheeldon Annex.
HOWARD, ERNEST E., 1012 Baltimore Ave., Kansas City, Mo.
HOWARD, HAZEL, 682 E. 42d St. N.
HOWES, CORA M., 628 Montgomery Drive.
HOWLAND, LUTHER H., 1207 E. Flanders St.
HUBBARD, LUCILE R., 554 Everett St.
HUGHES, HELENE, 474 Tillamook St.
HUNTER, JENNIE, 790 Gantenbein Ave.
INGHAM, FLORENCE, 1181 Harold St.
INGHAM, THEODORA, 1181 Harold St.
IVANAKEFF, PASHO, 246 Clackamas St.
IVEY, RALPH S., Route 1, Box 151, Milwaukie, Ore.
JACOBS, MARY B., Y. W. C. A., Los Angeles, Cal.
JAEGER, J. P., 131 6th St.
JAENICKE, A. J., U. S. Forest Service.
JAMES, FLORENZ, 4903 E. 70th St. S.
JAMES, NEILL, 223 E. 20th St.
JANE, GWENDOLEN, 724 E. Madison St.
JENNINGS, FLORENCE, Route 2, Box 145, Milwaukie, Ore.
JENNINGS, LOUISE, Linnton, Ore.
JENSEN, ROLF N., 462 E. Mill St.
JEPPESON, ALICE, 891 Albina Ave.
JOHNSON, FRED J., 206 E. Milton Ave., South Bend, Ind.
JOHNSON, VIOLET OLIVE, 410 Fenton Bldg.
JONES, F. I., 307 Davis St.
JOYCE, ALICE V., Tucson, Ariz.
KACH, F. G., 192½ E. Broadway.
KALTENBACH, ELSIE, R. F. D. 1, Milwaukie, Ore.
KERN, EMMA B., 704 Lovejoy St.
KERR, D. T., 556 Morgan Bldg.
KETCHUM, VERNE L., 1920 82d St.S.E.
KLEPPER, MILTON REED, Multnomah A. A. Club.
KOENNECKE, MARIE, Sandy, Ore.
KOEHLER, K. H., care Eastern & Western Lumber Co.
KRAEBEL, CHAS. J., U. S. Forest Service.
KRESS, CHARLOTTE, Box 45, Ann Arbor, Mich.
KRUSE, JOHANNA, Route A, Portland, Ore.
KUENEKE, ALMA R., 869 Clinton St.
KUNKEL, HARRIETT, 2222 Warren Ave., Seattle, Wash.
KUNKEL, KATHERINE, 406 Northwestern Bank Bldg.
LABHART, C. W., 1405 Northwestern Bank Bldg.
LACHER, B., 414 Promenade St., Oregon City.
LAMADE, ERIC, care Edwards Furniture Co.
LADD, HENRY A., care Ladd & Tilton Bank.
LADD, W. M., care Ladd & Tilton Bank.
LANDIS, MARTHA, 2019 E. Main St.
LAWFFER, G. A., 104 4th St.
LEADBETTER, F. W., 795 Park Ave.
LEE, FAIRMAN B., 1217 6th Ave. W., Seattle, Wash.
LEE, JOHN A., 505 Concord Bldg.
LEE, MRS. MARY KNAPP, 656 Flanders St.
LEITNER, EMMA, 130 E. 55th St.
LEITZ, EMIL G., 502 Jefferson St.
LETZ, JACQUES, State Bank of Portland.
LEWIS, CLYDE E., Multnomah A. A. Club.
LEWIS, L. C., 742 E. 65th St. N.
LEWIS, LUCY M., 105 N. 21st St., Corvallis, Ore.
LIBBY, HARRY C., 422 E. Stanton St.
LIND, ARTHUR, U. S. National Bank.
LOGGAN, CHAS. F., 461 Davis St.
LOUCKS, ETHEL MAE, 466 E. 8th St.N.
LUETTERS, F. P., 133 Vine St., Roselle, N. J.
LUND, WALTER, 191 Grand Ave. N.
LUTHER, C. V., 401 Selling Bldg.
MCARTHUR, LEWIS A., 561 Hawthorne Terrace.
MCBRIDE, AGNES, Box 383, Oswego, Ore.
MCCLAIN, M. F., Eugene, Ore.
MCCOLLUM, J. W., 553 Morgan Bldg.
MCCORKLE, J. F., 687 Flanders St.
MCCOY, SALLIE F., Box 1548, Boise, Ida.
MCCREADY, SUE O., Box 874, Vancouver, Wash.
MCCUEN, MRS. J. W., 654½ E. Burnside St.
MCCULLOCH, CHARLES E., 1410 Yeon Bldg.

McDermoth, Mrs. Nan A., Palo Alto, Cal.
McDonald, Mrs. Laura H., 354 E. 49th St. S.
McElroy, Florence, 954 Gladstone Ave.
McGilvra, J. C., 289 E. 47th St.
McIsaac, R. J., Parkdale, Ore.
McKaughan, Henrietta, Oregon Daily Journal.
McLaughlin, Saidie, 648 Kline St.
MacLeod, Hannah E., 554 E. Morrison St.
McMaster, Ruth E., 660 E. Oak St.
McNeil, Florence, Portland Library.
McNeil, Fred H., Oregon Daily Journal.
McDougall, Charlotte, W. S. C., Pullman, Wash.
Mass, Alfred T., 568 E. 10th St.
Mackenzie, Wm. R., 1002 Wilcox Bldg.
Macklin, Lucia, 756 Multnomah St.
Macintyre, Janette, 1454 Glenlake Ave., Chicago, Ill.
Mahoney, Helena C., 1238 Commonwealth Ave., Boston, Mass.
Mahoney, Paul, 1238 Commonwealth Ave., Boston, Mass.
Marble, W. B., 3147 Indiana Ave., Chicago, Ill.
Marcy, Edith, 3212 Day St., Seattle, Wash.
Marcotte, Henry, 218 E. 56th St., Kansas City, Mo.
Marion, Ralph, 1409 Columbia St., Vancouver, Wash.
Marsh, J. W., Underwood, Wash.
Marsh, Mrs. J. W., Underwood, Wash.
Marshall, A. H., St. Clair Hotel, Vancouver, Wash.
Marshall, Bertha, 1445 B St., San Diego, Cal.
Mason, Ella Sabina, 409 Salmon St.
Mathis, C. J., 5th and Morrison Sts.
Mattley, Maud, 495 Heights Terrace.
Mattson, Don F., Bureau of Markets, Dairy Project, Washington, D. C.
Mears, S. M., 721 Flanders St.
Meredith, George, 8½ N. 11th St.
Meredith, Mrs. C. M., 735 Hillsboro Ave.
Meredith, Daisy Lorena, 263 Miles St.
Meredith, Helen E., 735 Hillsboro Ave.
*Merriam, C. Hart, 1919 16th St. N. W., Washington, D. C.
Merten, Chas. J., 307 Davis St.
Miles, Sanford, 32 E. State St., Albion, N. Y.
Milleson, H. E., Dundee, Ore.
Miller, Jesse, 726 E. 20th St.
Mills, Enos A., Long's Peak, Estes Park, Colo.
Monroe, Harriett E., 1431 E. Salmon St.
Montague, Richard W., 1310 Yeon Bldg.
Montague, Jack R., 1310 Yeon Bldg.
Moore, Duncan, 1303 Chamber of Commerce Bldg., Chicago, Ill.
Morgan, Mrs. Christine N., Box 144, Palms, Cal.
Mortensen, Carl J., 464 Rodney Ave.
Morton, Grant J., Multnomah A. A. Club.
Muellhaupt, Oscar W. T., 407 U.S. National Bank Bldg.
Murray, W. J., 4823 66th St. S. E.
Neels, Carl, 495 Jefferson St.
Nelson, J. B., 232 Broadway.
Nelson, Buell C., 128 N. 18th St.
Nelson, L. A., 1207 Yeon Bldg.
Newell, Ben W., Ladd & Tilton Bank.
Newhall, Roger, 100 Grand Ave.
Newton, Josephine, 1350 Pine St., Philadelphia, Pa.
Nickell, Anna, 1415 Boren Ave., Seattle, Wash.
**Nilsson, Martha E., 320 E. 11th St. N.
Nordeen, Edith, 361 Graham Ave.
Norman, M. Oscar, 698 E. 62d St. N.
Nunan, Cinita, 489 W. Park St.
Oberg, A. W., Hughson, Cal.
O'Bryan, Harvey, 602 McKay Bldg.
Odell, Elizabeth D., 353 Harrison St.
**O'Neill, Mark, Worcester Bldg.
Oglesby, Etta M., 818 Lombard St.
Olsen, Doris M., 22 Ionian Court.
Olson, Ruth, 919 Borthwick St.
Ormandy, Harry M., 501 Weidler St.
Ormandy, James A., 501 Weidler St.
Osborne, Dorothy, 1142 Minnesota Ave.
Otis, Emily, Brown Apts.
Paeth, William J., U. S. Forest Service.
Parelius, Rex B., 441 E. 23d St. N.
**Parker, Alfred F., 374 E. 51st St.
Parker, Jamieson, 374 E. 51st St.
Parker, Rose F., Route 1, Box 58, Milwaukie, Ore.
Parker, Mrs. W., Route 1, Box 34, Milwaukie, Ore.
Parks, George R., 91 3d St.

PARSONS, MRS. M. R., Mosswood Road, University Hill, Berkeley, Cal.
PATTULLO, A. S., 500 Concord Bldg.
PAUER, JOHN, 1625 26th St., Sacramento, Cal.
PAYTON, PERLEE G., 3916 64th St. S. E.
PENDLETON, CECIL M.. 285½ 1st St.
PENLAND, JOHN R., Box 345, Albany, Ore.
PENWELL, ESTHER, 72 E. 82d St.
PERRY, R. A., 4924 E. 66th St. S. E.
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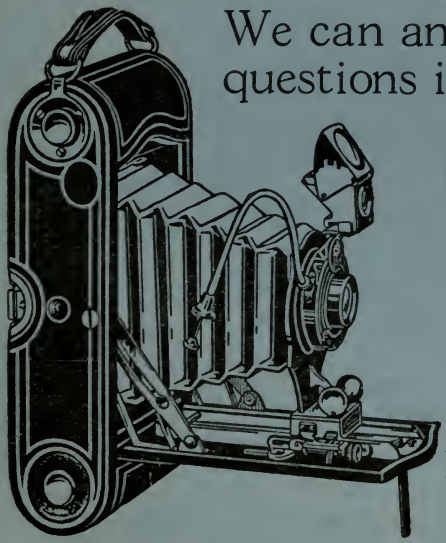

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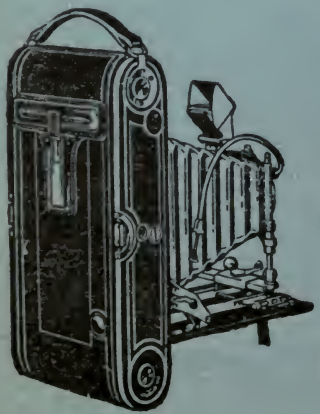

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My way in opening dawn I took,
Between the hills, beside a brook;
The peaks one sun was climbing o'er,—
The dew-drops showed ten millions more.

The mountain valley is a vase
Which God has brimmed with rarest grace.
And, kneeling in the taintless air,
I drink celestial blessings there.

—*William Rounseville Alger.*

Diamond Lake and Mt. Thielsen

Photograph by Boychuk

MAZAMA

VOLUME VI DECEMBER 1921 NUMBER 2

The Twenty-eighth Annual Mazama Outing

Crescent Lake to Crater Lake

By JAMIESON PARKER

In years past the Mazamas have visited each of the principal centers of mountaineering interest in Oregon—Mt. Hood, Mt. Jefferson, the Three Sisters, Crater Lake, and the Wallowa Mountains—and these excursions have taken them far and wide over the state. Most of our playgrounds have naturally been in the Cascade Range. If you will examine your map of Oregon you will see that Mt. Hood, Mt. Jefferson, and the Three Sisters are spaced almost evenly apart on a north and south line along the crest of the range, but that between the Sisters and Crater Lake there is a longer stretch of mountains, dotted here and there with many lakes. The Mazamas had long desired to see this country, but the lack of any one naturally prominent center for their activities made it necessary to depart from the "fixed camp" ideal which the club has traditionally preferred. Crater Lake, now of national fame, had not been visited by us since it became a national park. Thus it may be seen how appropriate was the plan developed by the Outing Committee,—a two weeks' trip, with camps at Crescent Lake, Diamond Lake, and, as a sublime climax, Crater Lake.

The start was made on Saturday evening, July 30, 1921, on the night train from Portland for Bend, Oregon. There were fifty-seven eager souls aboard. On our arrival at Bend on Sunday morning, ten others joined the party. The day was bright and promising. Looking towards the west, we saw with delight the snowy summits of the range, shining in the morning sunshine. We regretted that we could spend so little time in Bend, for it seemed to be an unusually attractive town, most picturesquely situated.

Soon after breakfast the mobilization began for our eighty-mile drive to Crescent Lake. One by one the automobiles were filled and pulled out with cheers. Bend is almost immediately east of the Three Sisters; Crescent Lake is southwest from Bend and near the summit of the Cascade Range; so our general direction of travel was towards the southwest, with a gradual gain of elevation as we penetrated into the mountains. The first twenty miles of the drive were through rather

barren country, supporting a sparse growth of jack pines and junipers, and showing many evidences of volcanic formation; then, as we began to leave the more level lands, the forests became more dense and the jack pines gave way to nobler members of the family. The vegetation of the entire region visited during the outing presents a marked contrast to that with which we in the Willamette Valley are most familiar. This contrast is mainly due, of course, to the great difference in the amount of annual rainfall. The clouds blowing in from the ocean are largely caught and condensed on mountainous ridges and summits before they reach central Oregon and the southern Cascade range. It was an interesting and to many of us a new experience to drive for miles through a forest of yellow pine, with the huge, reddish-barked trunks rising to a great height from an open, almost barren-looking floor, unencumbered with undergrowth of any kind. The road seemed to take its course in a most casual way between the great trees. A properly equipped car could be driven miles through such forests without the need of a road. We found the roads, as a rule, surprisingly smooth, on account of the quality of the soil, which seems to pack hard and resist the wear of motor vehicles to a remarkable degree. For this reason the trip was made in good time. By half past one the last load had arrived at Crescent Lake.

The cook-tent had been pitched in a grove of jack pines, at a convenient point, about two hundred yards from the western end of Crescent Lake. In the confusion of our arrival, with the mid-day sun above, and the smell of gasoline smoke still surrounding us, some of us may have felt a shade of discouragement; but when we walked to the shore of the lake, and found shade and a clean, white sand beach where the clear water lapped drowsily, and before us the placid blue expanse surrounded by tiers of green forests, we inwardly exclaimed: "O, what a place to play and rest, and dream the summer days away!" Soon the white canvas of tents began to gleam here and there amid the pines along the beach; and so quickly and completely are home attachments formed in the mountains that it was scarcely an hour before we began to hear controversies as to the relative claims of "Crescent Park," "Lake Shore Acres," etc., as residential neighborhoods. In the choice of a camp-site it is always consoling to the leaders to know that everyone is highly satisfied; and it was certainly so in this instance. Nor was it longer than it takes to unpack a dunnage bag before the first swimmers took to the water; and from that time on there was hardly a moment during the life of our encampment, except in the dead of night, when there was no one swimming or splashing in the lake. The anglers, too, feverishly prepared their

Crescent Lake, "Battleship Island," and Cowhorn Mountain

Photograph by Boychuk

Upper—Crescent Lake and Diamond Peak; note tents of Mazama camp along shore. Middle—Summit Lake (Photographs by Boychuk). Lower—Approaching summit of Diamond Peak (Photograph by R. L. Glisan).

tackle and sallied forth that afternoon. But somehow the Crescent Lake trout were not hungry, or were very shy; fortunately the fishermen had better luck as we moved southward.

Those who went to Mt. Baker last year were glad to see "Chef" Hall again in charge of the cook-tent. By dinner-time that evening we were well established in camp. We were joined in the afternoon by a number of automobile parties, including quite a contingent of residents of Eugene, Oregon, who had driven to Crescent Lake from the northwest, through Oakridge. The camp-fire that night was kindled near the shore of the lake. In spite of the fact that it was our first gathering and many friendships were yet to be made, it was one of our jolliest and best affairs of the kind.

Monday morning dawned fair. After breakfast, two parties, forty-five persons in all, set out for Cowhorn Mountain (elevation 7,666 feet), which lies about five miles south of the lake. The trip consisted of a long gradual climb through the pine forest, for the most part open and easy walking, and then a steep rocky ascent to the sharp peak which gives the mountain its name. From its summit there was a magnificent prospect, which included Crescent, Davis and Summit lakes and Diamond Peak. Our course on the prospective climb of Diamond Peak lay before us with map-like clearness of detail.

On the same day a small party walked around the shore of Crescent Lake to a place where a resort for anglers is maintained, and arranged for use by the Mazamas of five or six rowboats, which added greatly to our enjoyment of the lake during the rest of our stay.

Tuesday afternoon, August second, the start was made on our trip to Diamond Peak, elevation 8,792 feet. The party numbered fifty-five. The first six miles were covered that afternoon, a gradual climb of 700 feet along the Oregon Central Military Road to a camp near Summit Lake. The dust of the road and heat of the sun made a trying combination, but both were avoided to some extent by walking parallel to the road through the open woods on each side. A swim in Summit Lake was wonderfully refreshing and put us in a good mind to enjoy the repose of our bivouac.

We breakfasted by candle-light next morning. When dawn came we were well on our way. Diamond Peak, our objective, rose almost directly north, with the southern end of its long ridge stretching toward us. The start of our ascent was gradual, through a beautiful forest of mountain hemlock. Little by little the way became more and more rough and rocky. We had an occasional glimpse of the landscape to the south, which showed the progress of our ascent. The sun was well up when we came out on the open rock and discovered that already

we commanded a magnificent view. Almost the entire climb is on rock, but the east side of the ridge whose crest we followed was well covered with snow. Near the summit we traveled on snow occasionally. The summit was reached at ten o'clock. We had ample time to lunch and to enjoy the truly inspiring view. The prospect to the south was particularly interesting, as it showed us all the salient points of the trip towards Crater Lake which was still before us. Crescent Lake and Summit Lake seemed to lie at our feet. Beyond were Cowhorn and Sawtooth mountains, and from the base of the latter we could trace the beginning of our own Willamette River. Farther on there was a faint streak of silver which we knew to be Diamond Lake, with Mt. Bailey and the jagged tooth of Mt. Thielsen flanking it on either side; and then, still farther away and but faintly seen, the unmistakable long rim of Crater Lake. The descent was rendered more interesting by two speedy glissades. At the bivouac camp we refreshed ourselves with food and rest, and then started on the last long lap of the journey "homeward." Crescent Lake and its surroundings seemed like a Promised Land after the heat and dust of the road. We arrived in time for "the most delicious swim yet"—and perhaps, too, the best dinner yet.

Thursday was a day of rest,—real, honest, mountaineers' rest. The thought of leaving early the next morning seemed nothing less than a heartless breaking of home ties, so endeared had our camp become to us. The rowboats were in constant use all day long. At five in the afternoon there was a general farewell swimming party. It was the cook's afternoon off, and the Outing Committee presided over a buffet supper by the shore of the lake. A beautiful spot was selected,—a semicircular space facing the water and flanked by pine trees. Here, for the last time, we watched the sunset light strike Odell Butte and the hills beyond, while the lake lay quietly reflecting the deep turquoise of the eastern sky. A spirit of peace seemed to rule the visible world. This parting memory of Crescent Lake will long be with us.

We bade farewell to our first camp at seven on the following morning, Friday, August 5. As the walk to Diamond Lake, our next stopping place, was too long to be made in one day, each person carried his necessary camping equipment. The commissary and cooking outfit for the party were on a pack-horse. All the permanent camp equipment, heavy supplies, and dunnage were sent by truck, via the central Oregon highway, for delivery to us at Diamond Lake.

In spite of universal reluctance to leave our pleasant camp of the past four days, there was the urge of exploration and possible adventure

to lure us on; so we set out cheerfully southward over the Oregon Skyline Trail. The entire party was divided into seven groups, with a leader for each group. The first six or seven miles were through a forest of jack pines. As the sun rose higher, we began to long for shade. The jack pine, as a shade tree, is a decided failure; all it succeeded in accomplishing for us was to shut out the view in every direction, and prevent the slightest breath of wind from reaching us. But matters improved rapidly as we climbed higher and higher towards the Cascade divide. Hemlocks and Douglas firs appeared in increasing numbers. We were approaching the heights which are exposed to the moist winds from the west. Crescent Lake drains to the east, and Diamond Lake to the west. About noon that day we topped the divide, at Windigo Pass. Here there was a real forest at last. As the trail began to descend, we caught occasional glimpses through the trees, which showed us some of the prominent landmarks,—the rounded dome of Mt. Bailey, Thielsen's rugged profile, and Howlock Mountain nearer at hand. Soon we were cheered by the sound of running water. Little by little it became more distinct, until finally our trail crossed Bradley Creek. Most of the parties lunched here and enjoyed an hour's rest.

We started forth again, refreshed and hopeful. But alas! we were soon among the jack pines again. It was even hotter than in the morning, and the trail had been trampled into dust by many thousands of sheep. Such was our introduction to the Kelsay Valley; but relief came once more when we reached the Umpqua River, here only about fifteen feet wide, in the middle of the afternoon. We found a sheepherder (I suppose local usage forbids the more poetic word shepherd) engaged in building a bridge over the river. He told us that his partner was due to arrive very shortly from our trail to the south, with a large flock—or band, as he put it—of sheep. It was deemed advisable, for obvious reasons, to let the sheep pass; and even though this meant considerable delay in our arrival in camp that night, it probably had the secret approval of all, for the shade by the river bank seemed very good. After nearly two hours' waiting, we learned that the sheep had been sidetracked somewhere and the trail would be unobstructed. So off we started on the last lap. An hour's walk brought us to the head of Spring River, where it was decided to camp for the night. It was a remarkable spot. Just below the trail, as it rounded a little gully in the woods, there sprang from the earth a full-grown river, perhaps fifty feet wide, the water of which was practically ice-cold. This river seems to be the united reappearance of several

smaller streams which lose themselves in the earth a few miles up the valley.

We sought our beds early and slept soundly that night, for it had been a fatiguing day,— perhaps, as one looks back, the hardest of the whole outing.

We were headed south once more by half-past five the next morning. There was unanimous appreciation of the value of an early start, for we all remembered the heat of yesterday's relentless sun. But this second stretch, to Diamond Lake, seemed unexpectedly short; every mile of it was pleasant and interesting. The pines were relieved now and then by fine forests of fir and hemlock. At each closer view of Thielsen and Bailey we were elated over our progress. Thielsen Creek and Sheep Creek provided pleasant resting places; and we were still "going strong" when we arrived, well before noon, at the northern end of Diamond Lake. We had yet before us the two-mile walk along the road by the lake to our camp at its southern extremity. Although we had looked forward to this final stage of the journey as the most pleasant, we found it hot and dusty. Perhaps it was because, in our impatience to reach "home" once more, we hurried unduly.

The camp had been splendidly located. A little stream of clear, cold water flowed into the lake, and beside it, on a level space of open ground about ten feet above the lake level, the cook-tent was pitched; between it and the lake were a sloping bank, a narrow fringe of graceful trees, and a sandy beach. On the other side of the little stream, a grassy terrace dotted with pines afforded an admirable site for the sleeping quarters. The lake is almost a perfect rectangle in shape, and we were at its southeastern corner. Across the water Mt. Bailey reared its snow-crowned summit, while behind us tier above tier of forest rose towards the sharp, rocky peak of Mt. Thielsen.

There was an undercurrent of excitement in camp that afternoon. Immediately after our arrival we heard the story of the robbery of two members of our party the night before,—Mr. R. E. Kremers and the cook, Mr. H. B. Hall. Mr. Kremers had motored down with his family and the chef from Crescent Lake, by the same route over which the baggage was taken. As they approached Diamond Lake in the night, they were "held up" by two men, and each lost all the cash he carried. The excitement over the case was heightened by the prevailing opinion that one of the highwaymen was Dr. R. M. Brumfield, of Roseburg, Oregon, who was "wanted" for murder and was supposed to be at large somewhere in that part of the country. The cook's narrative of the affair, with knives and forks as descriptive accessories,

Upper—Party climbing Mt. Bailey; Diamond Lake and Mt. Thielsen in distance (photograph by R. L. Glisan). Middle—Mazama camp at Diamond Lake. Lower—Mt. Bailey and Diamond Lake (Photographs by Jamieson Parker).

Diamond Lake, with Diamond Peak in the distance

Photograph by Boychuk

became a camp classic; he recited and illustrated the lurid details again and again to appreciative audiences all afternoon.

At the camp-fire that night there was another hold-up. The ferocious bandit proved to be Mr. Rodney L. Glisan; the innocent victim, Mr. Alfred F. Parker, was relieved of forty dollars—the exact sum lost by the cook—which was presented by Mr. J. E. Bronaugh, with compliments of the whole party, to Mr. Hall. The next day we learned that one of the highwaymen had been arrested and the other located, but that neither of them was Brumfield.

Most of us were quite willing to observe the Sabbath with punctilious and commendable idleness. A party of fifteen backsliders, however, made the ascent of Mt. Thielsen, returning to camp soon after noon, and reported a most interesting trip. The fishermen also made a busy day of it; some of them had very good success. Although the natural surroundings of Diamond Lake, with its two guardian mountains, were probably more interesting than those of Crescent Lake, we found the lake itself less enjoyable for swimming on account of fine infusoria, probably of vegetable origin, suspended in the water near shore. It is a shallow lake, and its water is remarkably warm. We became quite attached to a flock of sea-gulls which haunted the lake shore near the cook-tent. It was interesting to note that they stayed almost continually in or about the mouth of the rivulet, evidently preferring its coolness to the warmer water of the lake; probably it seemed more like the ocean which they had left five thousand feet below for this summer jaunt. We had seen sea-gulls on Crescent Lake also, and later were somewhat surprised to find them on Crater Lake, more than six thousand feet above sea-level.

Here at Diamond Lake occurred the only serious mishap to any member of the party during the entire trip. Mr. R. W. Ayer, chairman of the Outing Committee, developed a case of blood-poisoning in the leg as the result of an infected blister. In spite of all the care that could be given him under the circumstances, his condition grew worse, and on Sunday night Mr. J. R. Penland and two others took him by automobile to Klamath Falls, where he was placed in a hospital. He improved rapidly under careful treatment, and rejoined us later, much to our relief and pleasure, at Crater Lake. One of the party, Miss Mary Billmeyer, a professional trained nurse, showed a fine spirit in making the trip to Klamath Falls and remaining to care for Mr. Ayer until he recovered.

The official ascent of Mt. Thielsen (elevation 9,178 feet) was made on Monday, August 8. The party numbered forty-six and was under the guidance of Mr. H. L. Wolbers, who had climbed the mountain

the day before. We left camp at six in the morning. A blazed trail led through the dense pine forest, and took us up to the larger and more open timber on the southwest ridge of the mountain. The ascent gradually became steeper. The views up and down the ridge were of unusual beauty, even in this region of beautiful scenery. The ground was of fine yellow pumice, in harmonious contrast with which the great gnarled trunks of the hemlocks stood forth in picturesque groups. Occasionally a long vista would open below us, showing the odd rectangular expanse of Diamond Lake, with Mt. Bailey towering ever higher behind it. Gradually, however, as we climbed on and left the timber, the rival mountain began to sink again; and then we knew that we were approaching our goal. When the base of the forbidding pinnacle was but a few hundred yards above us, we began to swing towards the right, to attack it on a more favorable side. This flanking movement involved some fairly steep rock climbing. Finally we found ourselves in a little saddle on a shoulder of the pinnacle; a hundred feet or so above was the summit, which could only be attained by scaling the rocky wall before us, inclined probably seventy-five degrees from the horizontal. Here on this little scrap of level rock we stopped for lunch. Clouds had been gathering all morning, and now and then swirled around us, shutting off the sunshine and the view and giving one a peculiar sense of isolation. After a leisurely lunch and a few minutes of rest, we prepared ourselves for the final effort. As we stood at the bottom of the formidable precipice, a voice cried down from above, "Come on up and have some pineapple!" Here was an incentive indeed—a rare one in mountain climbing—and it apparently had an excellent effect. On reaching the summit, we found Mr. Pendleton, with several cans of pineapple which he had smuggled up in his knapsack a short time ahead of us. We were grateful for the encouragement, and the physical as well as the moral inducement. The ascent of the pinnacle is neither dangerous nor very difficult for one accustomed to steep rock climbing, as the rock is firm and there are good holds for the hands and feet. It is spectacular enough, however, to appeal to the most blase Alpinist. Standing on the point of the slender *aiguille* and looking downward, a straight drop of hundreds of feet is all that can be seen on every side save the one by which we ascended. It gives one almost the same feeling as if one were perched high on a swaying tree; it seems as if that steeple of rock might suddenly collapse in a puff of wind.

The clouds which drifted to and fro about us prevented our enjoying the full view from the summit, but from the reports of those who had climbed the day before, under more favorable weather con-

ditions, it is unusually striking and interesting. Crater Lake, only a few miles to the south, is the most remarkable feature of the prospect. The whole structure of the collapsed volcano, with its mighty approaches surmounted by the vast circular rim, and even the blue water within, are all plainly visible. This is indeed the best view for one who would rebuild in his imagination that once stately peak, and then try to picture the great catastrophe which sent the main bulk of the mountain tumbling down into a huge abyss. Beyond Crater Lake, to the south, can be seen Mt. McLoughlin and (on clear days) Mt. Shasta. Northward there is the sweep of the Cascade Range, with many snowy summits fading off into the dim distance with the Three Sisters and Mt. Jefferson.

But many of these beauties were hidden from us as we sat amid the cloud-wreaths enjoying our pineapple. The summit is only large enough to accommodate ten or twelve persons at once, so that the stay of each group reaching it could only be for about fifteen minutes, to avoid delaying the party below. One by one we regained the level shoulder below the pinnacle. Here we rested again, until all had reached the summit and returned, and the party was once more complete. Out of forty-six who had come out that day, all but one had signed their names in the record book on the summit. The return to Diamond Lake was made quickly and uneventfully, and camp was reached at three in the afternoon.

Only one more day at Diamond Lake remained. Most of us were in a mood for resting that day; we had not had many opportunities to be lazy thus far, and there was still more work ahead. After our experience with hot sunshine among the jack pines in the Kelsay Valley, we were not inclined to make light of the discomfort which probably awaited us on our walk to Crater Lake. We had heard, and observed on the map, that we would have to pass over a pumice desert, the possible terrors of which were a continual subject of speculation and discussion. Nevertheless, and in spite of the many incentives to rest, a small band of indomitable spirits set out that morning for Mt. Bailey (elevation 8,356 feet), under the leadership of Mr. Glisan. On their return in the evening, they reported a very interesting trip, rewarded by a spectacular view of Mt. Thielsen over Diamond Lake.

Above the eastern shore of Diamond Lake there is some beautiful country, consisting largely of park-like, grass-covered terraces, with numerous clumps of pines. Here and there a tiny brook wanders down to the lake, following one enchanting little dell after another. Indeed, there were far more scenic beauties in our very neighborhood than we had time to explore. So the day was passed quite pleasantly.

We would gladly have spent many more days there; even the anticipation of the glory of Crater Lake failed to give us more than a lukewarm urge to be off.

We were glad to have good news of Mr. Ayer that evening. Messrs. Penland and A. F. Parker returned to camp, after having taken him to Klamath Falls and seen that he was on the way to recovery.

At 5:30 a. m. on Wednesday, August 10, the start was made for Crater Lake. Again the dunnage and supplies were loaded on trucks and sent ahead by the roundabout road; but this time our bedding also went that way, for it was planned to make the march in one day. One by one the companies set forth. Probably many mental resolves were made to revisit that spot of haunting beauty, as we glanced back at it with silent farewells. The first four miles of the day's journey were over a dusty road. We were indeed thankful that our early start enabled us to make this part of the trip in the cool of the morning. Leaving the road, we followed a trail for a few miles until we came to the boundary of Crater Lake National Park. From this point to the rim of the crater we had a dirt road—merely a wide trail—newly made and apparently not used by vehicles. The soil became more and more obviously pumice as we advanced southward; the country flattened out, and the pines grew more sparsely. We were evidently approaching the dreaded pumice desert. By 8:30 we had reached the last group of stunted pines, and saw before us a great treeless expanse as level as a floor, over which the so-called road, merely scratched in the soil, stretched like a long thread into the distance. The desert was now all that intervened between us and the slopes of the approach to Crater Lake—the base of the ancient Mt. Mazama. Eager to have this barren waste behind us, we started on determinedly, though to be sure it seemed a prodigious distance across. Perhaps some of us thought of all the difficulties and dangers of the Sahara—burning sands, tormenting thirst, sandstorms, and sunstroke—but (such are the whims of Fate!) the desert failed completely as a mimic Valley of the Shadow of Death in our "Pilgrim's Progress." As a matter of fact, it furnished one of the most enjoyable memories of the entire trip! It was hardly more than a mile wide where we crossed it, though it had appeared so vast at first glance. The early morning sunshine was just comfortably warm, and a cool, refreshing breeze blew constantly from the west. In every direction there was a broad sweep of landscape, flanked by mountains. A broad plain is always impressive, and this was by contrast a delight after many miles of travel through mountains and forests,—especially as all the familiar and prominent landmarks stood out in plain view.

Photograph by R. L. Glisan

The base of Mt. Thielsen's pinnacle. Note climbers starting up.

View north over Pumice Desert with Mt. Thielsen in the distance. *Photograph by Jacques Letz*

Behind us were our old friends, Mt. Thielsen and Mt. Bailey—the former appearing as a steep pyramid—and their adjacent forest-clad ridges; to the east and west were other hills and peaks, for the most part geologically recent volcanic cones; ahead of us, to the south, stretched the rim of the giant crater, like a rugged chain of peaks. With keen interest we identified and studied each crest, and noted that our road headed straight for the notch between Llao Rock and Glacier Peak. The sloping approaches to the rim had an interesting appearance,—open, grassy areas alternating with dark trees and patches of snow.

By nine o'clock we were once more among pines, with the desert behind us, and had begun a gradual climb which lasted until we gained the rim. After passing through a mile or so of pine forest, the landscape began to change. There were many stretches of open country, dotted with groves. We left the pines behind, and began to see great patriarchal mountain hemlocks, with picturesque gnarled trunks and cool, deep green foliage. When our way led us beneath them we welcomed their shade, for we were climbing once again, and the sun was now high enough to make its presence more emphatically felt.

As we moved farther up the side of old Mt. Mazama, the landscape became more and more beautiful. There were mountain flowers in increasing numbers,—great billowy downs rich with larkspur and the fragrant lupine, with here and there a patch of snow. Northward the view continually expanded. We could see our course over the desert,—a long, straight, yellow scratch on the flat, brownish pumice. Our beloved Diamond Lake reappeared,—a streak of glistening blue. Already we were beginning to feel the magic spell of Crater Lake. We knew that the culmination of our trip was at hand; and a more nobly fitting prelude for the superb climax could hardly be imagined. We thought it odd, too, and were almost indignant, as we remembered that amid all the enthusiastic descriptions of the beauties of Crater Lake which we had read and heard, so little had been said of this surrounding country. The probable cause is the fact that the great majority of tourists reach the lake hurriedly by automobile, and are so overawed by the spectacle of the lake itself that they remember nothing else. Undoubtedly our manner of approach was ideal. On we went, as rapidly as we could, inspired by the beauty around us, and thrilled with anticipation of the prospect from the rim, now close at hand. Suddenly an unexpected sound brought us to a stop. Could it be? The exhaust of an automobile a few hundred feet above us! We might have expected it, knowing that we were soon to be on the

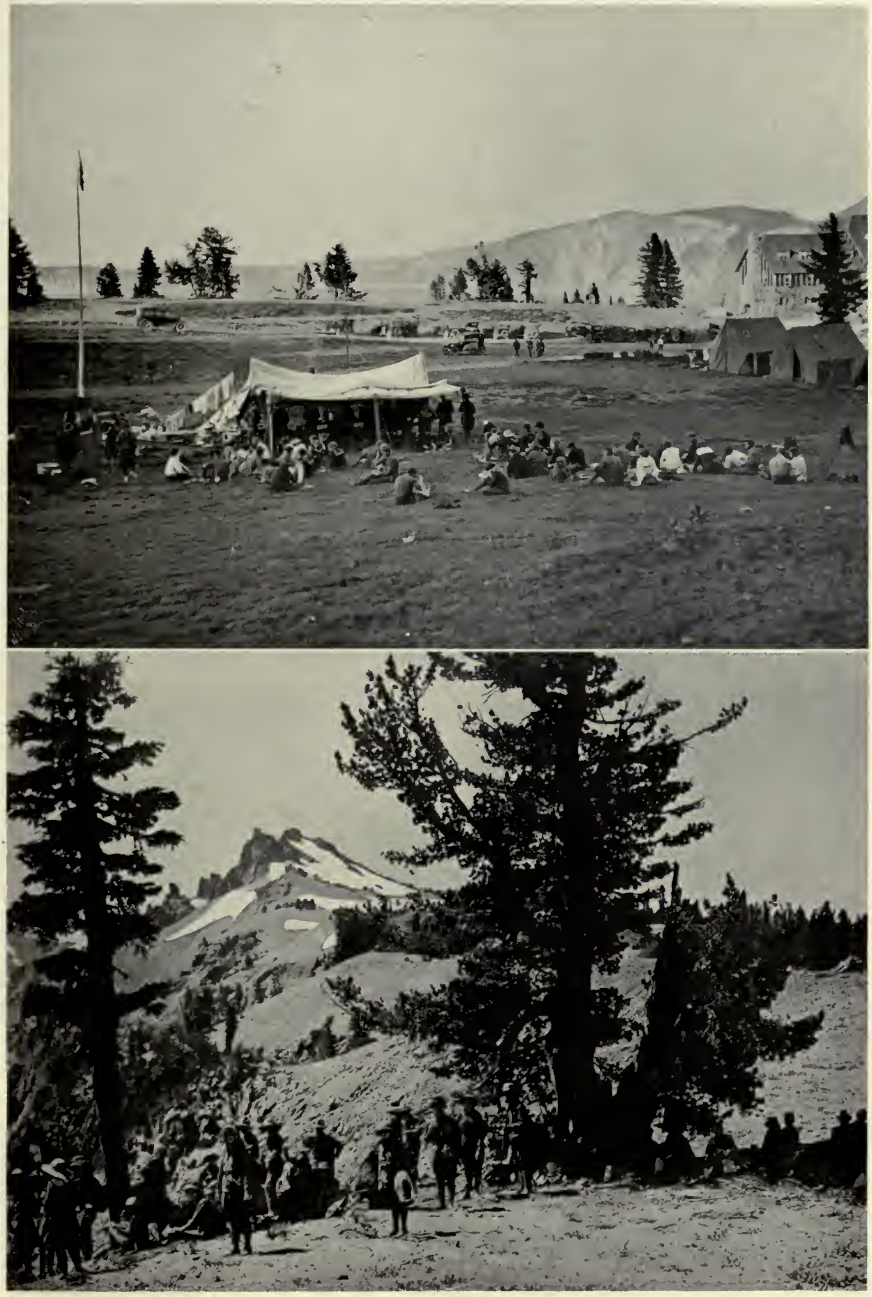
rim road; but how strange and discordant that noisy greeting seemed, bursting upon the tranquillity of Nature!

A few more steps brought us to the road; then, turning to the right, we followed its easy grade toward that gap between the peaks,—that same gap which had aroused our interest from afar as we saw our course constantly aiming for it. Now it seemed a mere stone's throw. Could we really be so near at last? We fairly ran. The road bent to the right; a hundred yards straight ahead the earth seemed to end. Over the open ground we hurried with bated breath, and then, all in an instant, we found ourselves on the very rim of Crater Lake,—— at last!

I know of no other condition or experience in mountaineering comparable with one's first view of Crater Lake, especially when, as in this instance, it terminates a long ascent by foot. The *suddenness* of it is perfect; for in one moment you see no sign of it, and in the next you behold it in its complete, indescribable grandeur. The majesty, the vastness, the sublimity of it, all burst upon your sight as you step up a bank of earth!

Crater Lake is now famous; nobody familiar, even through books and magazines, with the natural wonders of the West, or indeed of the world, will need an introduction to it, nor any description. Countless descriptions have been written. None of them seem adequate; perhaps it is the subtle, intangible, indescribable quality of it that brings forth the many attempts!

We reached the rim at eleven o'clock. The sun shone bright across the lake, weaving a gold embroidery on the liquid sapphire below. We stood on the northwest edge of the bowl; far around to the right on the southwest side, we could see the hotel,—and discouragingly distant it seemed; for we knew our camp for the night would be pitched somewhere in its neighborhood. After the first exulting thrill was past we began to feel the fatigue of our forced march, and to rest here in the shade of a great hemlock, with that inspiring prospect ever before us, was indeed a delight. By one o'clock we were all on our way again. Some turned to climb Llao Rock, to the east of us, before going on. Others left the road farther on and scrambled up Glacier Peak or The Watchman. The Crater Lake Park Service, knowing of our arrival, kindly sent out a number of automobiles to bring in those who cared to ride, and there were many who accepted, in the face of a seven-mile walk over the hot, dusty road. One by one the contingents arrived at the hotel, which was popular that afternoon, for there we found our mail and a plentiful supply of hot water and soap.



Photographs by Boychuk

Upper—Mazama camp at Crater Lake. Lower—The spot where the Mazamas reached the rim of Crater Lake, with Glacier Peak beyond. The lake is to the left.

Crater Lake, from the trail below the hotel. Mt. Thielsen in the distance. *Photograph by Boychuk*

The public camp-ground was the only suitable place for our establishment, for here we were assured of a plentiful water supply. Thanks to Mr. Sparrow, the park superintendent, a generous space had been reserved for our camp, and it proved all that could be desired. The cook-tent was pitched in the middle of an open grassy space, near the water faucet. On the other side of a little ridge we found ideal sleeping quarters, quiet and secluded from all the rest of the world, in a forest of great hemlocks. These noble trees, friendly, protecting and beautiful, were a constant source of pleasure.

Although our three days' stay at Crater Lake was full of interest and enjoyment for all of us, it must be said that with our arrival there the story of the outing practically ends. There were such a large number of different points of interest to be visited and possible excursions to be made that the party naturally separated itself into groups of individuals, who spent their time in the most convenient or congenial way. There was the automobile drive around the rim, and the all-day circuit of the lake by motor-boat; there were trips to Wizard Island and the Phantom Ship; fishing, rowing, and swimming in the lake; the ascent of Scott and Garfield peaks; visits to The Pinnacles and The Garden of the Gods; and trips on foot or horseback to many other less-known spots of beauty or interest. We all made the most of our time, and the three days afforded abundant occupation. In spite of the diversity of our daily recreations, we were united each evening at the camp-fire. On several of these occasions we were fortunate in being addressed by Mr. Will G. Steel, who has devoted his time and energy for years to the establishment and development of Crater Lake National Park. Judge C. B. Watson, of Gold Hill, Oregon, was also with us, and told us how in 1873 he had visited Crater Lake, which at that time had been seen by very few white men.

We were grateful to Mr. Sparrow, the park superintendent, for many courtesies and kindnesses which helped to make our stay in the park more enjoyable.

Sunday morning, August 14, was the time set for our departure. We were given a spectacular send-off, for early in the morning a thunderstorm burst upon us, bringing rain and hail,—the first break in the hitherto perfect weather of the two weeks' outing. The rising sun greeted us with flame-colored clouds, and the thunder was still rolling among the mountain tops when a rainbow appeared over the lake, standing out against a violet cloud and reflected in the deep blue water beneath.

Such was our leave-taking. Directly after breakfast the automobile stages began to collect their loads, and one by one they started on the eighty-mile drive to Medford. A stop was made on the way to

visit the natural bridge over Union Creek, and farther on we lunched near the waterfall where Mill Creek plunges into Rogue River. At Medford we took the train for Portland, arriving at our starting point on the following morning, Monday, August 15.

The sudden plunge that day into a totally different life was shockingly abrupt and somewhat trying. The easy, instinctive way in which one falls into the freedom of the woods and mountains has always seemed to me remarkable, by comparison with one's feelings on returning to the routine of the city. The sense of strangeness in the latter case shows that "civilization" is an acquired taste. And yet how few there are who seem to realize this!

It was an ideal outing—certainly one of the most varied and interesting in Mazama history. It showed us some of the most beautiful country in our state of Oregon—regions never previously visited by the club—and Crater Lake added the final touch of inspiration. The trip was well planned by the Outing Committee. All who participated feel that they owe an especial debt of gratitude to Miss Martha E. Nilsson, of the committee, for her many evidences of thoughtfulness and her untiring efforts to make every detail of the outing as nearly perfect as possible.

It was unfortunate for us that the president of the club for the year, Mr. A. Boyd Williams, was unable to be with us. At the camp-fire, particularly, we missed his genial presence.

But our regrets are few indeed. Crescent Lake, Diamond Lake, Crater Lake; Cowhorn, Diamond Peak, Thielsen and Bailey,—what a host of vivid and happy memories each name suggests! And our recollections of this summer's play-days among the sunlit pines, by lakeside, stream and mountain, will remain,—a priceless possession.

□□□

Personnel *of the* Twenty-eighth Annual Outing

W. Claude Adams, Portland, Ore.
Roy W. Ayer, Portland, Ore.
Hortense Beuschlein, Seattle, Wash.
Margaret A. Biddle, Milwaukie, Ore.
William S. Biddle, Milwaukie, Ore.
Edmund Bidwell, Portland, Ore.
Mary P. Billmeyer, Portland, Ore.
Walter Boychuk, Portland, Ore.
Jerry E. Bronaugh, Portland, Ore.
Dorothy S. Brownell, Portland, Ore.
R. H. Bunnage, Portland, Ore.
Nellie Byrd, Portland, Ore.
Agnes Campbell, Monmouth, Ore.
A. E. Caswell, Eugene, Ore.
Eunice M. Catlow, Bend, Ore.

Photograph by Ira A. Williams

View north from a point near the rim of Crater Lake. Mt. Thielsen is on the right, Mt. Bailey on the left; in the extreme distance is Diamond Peak, Diamond Lake showing just below it. On the right, below Mt. Thielsen, is the Pumice Desert.

Summit of Diamond Peak, August 3, 1921

Photograph by Boychuk

J. Homer Clark, Portland, Ore.
J. H. Collins, Eugene, Ore.
Mrs. J. H. Collins, Eugene, Ore.
Bertha F. Comings, Eugene, Ore.
Edith Crocker, Eugene, Ore.
Bessie Day, Eugene, Ore.
E. E. DeCou, Eugene, Ore.
James R. Forsyth, Portland, Ore.
Jocelyn Foulkes, Portland, Ore.
Kenneth F. Frazer, Portland, Ore.
Bernice J. Gardner, Portland, Ore.
W. A. Gilmour, Portland, Ore.
Rudolph H. Gjelsness, Eugene, Ore.
Rodney L. Glisan, Portland, Ore.
Margaret A. Griffin, Portland,Ore.
Harry B. Hall, Portland, Ore.
W. P. Hardesty, Bend, Ore.
M. H. Hartwell, Portland, Ore.
Mrs. M. H. Hartwell, Portland,Ore.
Nelle Heizer, Eugene, Ore.
Mrs. J. Hunt Hendrickson, Portland, Ore.
Helen Hollister, Portland, Ore.
Charles R. Holton. San Francisco, Cal.
Elizabeth M. Hopper, Portland,Ore.
Bertha Hunter, Portland, Ore.
Jennie Hunter, Portland, Ore.
Neill James, Portland, Ore.
Martha Jensma, Portland, Ore.
Lula D. Johnson, Portland, Ore.
Ethel B. Kinney, Portland, Ore.
K. H. Koehler, Portland, Ore.
Mrs. K. H. Koehler, Portland, Ore.
Robert E. Kremers, Portland, Ore.
Mrs. Robert E. Kremers, Portland, Ore.
Christine Lancaster, Portland, Ore.
John R. Leach, Portland, Ore.
Mrs. John R. Leach, Portland, Ore.
Jacques Letz, Portland, Ore,
Ethel M. Loucks, Portland, Ore.
Arthur H. Marshall, Vancouver. Wash.
Ella S. Mason, Portland, Ore.
George B. Maxwell, Portland, Ore.
Mrs. George B. Maxwell, Portland, Ore.
Anne Shannon Monroe. Portland, Ore.
Richard W. Montague, Portland, Ore.
Mrs. Christine N. Morgan, Portland, Ore.
Sabra L. Nason, Pendleton, Ore.
B. W. Newell, Portland, Ore.
W. K. Newell, Eugene, Ore.
Martha E. Nilsson, Portland, Ore.
Cinita Nunan, Portland, Ore.
Ruth Olson, Portland, Ore.
Dorothy Osborne, Portland, Ore.
Alfred F. Parker, Portland, Ore.
Jamieson Parker, Portland, Ore.
Joseph Patterson, Pittsburgh, Pa.
Cecil M. Pendleton, Portland, Ore.
John R. Penland, Albany, Ore.
August Petersen, Portland, Ore.
E. F. Peterson, Portland, Ore.
Laura H. Peterson, Portland, Ore
H. L. Plumb, Bend, Ore.
Lillian T. Power, Portland, Ore.
Frank M. Redman, Portland, Ore.
Edwin L. Rice, Portland, Ore.
Ella P. Roberts, Portland, Ore.
C. M. Rogers, Portland, Ore.
T. W. Roland, Portland, Ore.
Mrs. C. W. Roland, Portland, Ore.
J. Thorburn Ross, Portland, Ore.
Mrs. J. Thorburn Ross, Portland, Ore.
Ladner V. Ross, Portland, Ore.
Lindsley W. Ross, Portland, Ore.
Katherine Schneider, Portland, Ore.
Leotta Smith, Oswego, Ore.
Marie C. Smith, Hillsboro, Ore.
Alice M. Tenneson, Portland, Ore.
E. T. Valliant, Waluga, Ore.
Edwin Widmer, Portland, Ore.
Charles G. Wilson, Bend, Ore.
Catharine Winslow, Eugene, Ore.
Harry L. Wolbers, Portland, Ore.
W. C. Yoran, Eugene, Ore.

Mazamas *in the* Mountains

By Anne Shannon Monroe

Where solitude holds forgotten wilds; where mountains rear their carven heads against skies of purest ether; where lakes like gems adorn the bosom of Mother Nature; where no human feet have trod,—there Mazamas love to go. Like some spirit land of unimagined beauty invoked for the seeker, the heart of the Cascades in the summer of 1921 unfolded before our eyes; serene as a painted canvas, mysterious as some buried city lifted to view, luring as the eyes of youth. We threaded her trails from lake to lake; we climbed into the skies by way of her mountain peaks and looked upon eagles soaring far below; we went down into the earth by way of her deep sunken craters; we sat under juniper trees and watched waves of light and shadow play on her burnished desert sands. We lay all night under her great fir trees; we looked up to the crescent moon in the midnight sky; we heard in the breeze from the plains the far-off cry of a lone timber wolf.

"What do we get out of exploring mountains?" ask those who have never explored. What do we get? Better comradeship with humankind, a gentler sympathy, a vaster patience. We learn lessons from the stones, crumbling through the ages into fertile soil; from the flowers that bloom far up above the ken of man; from the patient waters that lap the lonely shores; from the whisperings in the tops of tall trees. We get an understanding of what true religion means; of the sanctity of life when consciously connected with the God of all life. We get an understanding of the human stupidity of waiting for death to separate our souls and bodies before the former shall turn back to the Infinite, the latter turn to the earth. In the deep stillness we come in touch with the silent forces of the universe. We get courage to go back to the cities, into the crowded ways of man; there to render honest service, that we may earn the right to return again and again to the wilderness, until that last day shall come for each of us, when we shall go out into the Great Solitude to return no more.

Mount Thielsen

By Ira A. Williams
Oregon Bureau of Mines and Geology

Mt. Thielsen has frequently been referred to as the "lightning rod" of the Cascade Range. About as often and with equal appropriateness it is called "Oregon's Matterhorn." From its general appearance either designation would seem to fit it fairly well. But here the similarity ends.

We think of a lightning rod as a measure of protection against the possibly destructive effects of atmospheric electricity. It is usually a rod or series of metallic points which, rising higher than neighboring parts of its own structure or others nearby, is intended to intercept and to conduct and dissipate in harmless directions the electric bolts that pass earthward from the clouds. Mt. Thielsen's summit rock rises with the sharpness of a pinnacle, and surmounts the vast bulk of the mountain itself much as would the lightning rod points which many of us recall as essential adjuncts in the construction of buildings in the "thunder-shower" states of our earlier days. And there is evidence about this summit pinnacle to show that it has doubtless many times stood in the path of the dynamic discharges that accompany the thunder-storms with which it must ever and again be attacked. But its powers of protection against the action of these elements are about as effective as those of the now almost traditional metal rod proved to be.

As the Matterhorn of the Cascade Range, it resembles the celebrated Alpine peak of that name only in the profile of its summit rock, which because of its abruptness has long been a challenge to even the more intrepid of mountain climbers. In its structure and in the character of its rocks it possesses features all its own. The Matterhorn of Alpine fame is a peak of crystalline rocks, while Mt. Thielsen is of volcanic origin and is composed essentially of materials ejected from the crater of an explosively eruptive volcano.

The fitness, therefore, of either of the above titles rests upon appearances alone; and, generally, that has been a sufficient and suitable reason for the names given to mountain peaks, as for the names of other land features. We have reached a time, however, when we are not satisfied merely to observe the outlines of a mountain, but in order to attach to it even an appropriately descriptive appellation, it must be more closely inspected and its structure and geological make-up determined. In other words, a speaking acquaintance must be cultivated.

And so, as we view Mt. Thielsen from a distance, north, south, east or west of it, we cannot but wonder as to the reason for the notable precipitousness and the jagged character of its upper slopes. Its ruggedness appears to increase as we draw nearer; until, from the mountain's very base, it rises above the forest fringe a great upstanding spire outlined against the sky. Leading toward it from all points of the compass, as though to steady the structure against the forces that beset it, is a succession of radiating ridges and intervening long talus slopes. Each ridge has been whittled to a saw-tooth edge, whose craggy cliffs in profile are as groups of silent guardian sentinels stationed about the parent peak.

Thus does Mt. Thielsen appear on close approach. But we must still ascend its western flanks to gain our first real impressions of the integral structure of the mountain or to obtain a correct and satisfying idea of the method of its formation.

There are two main processes by which land forms are produced. We may call them the upbuilding and the tearing down processes. Over the entire surface of the earth, both forces are ever at work. Individual localities may be selected where one is much in the ascendency over the other, or others where the effects of the working of one process are about balanced by those of the other; or, again, where there is no evidence that the upbuilding agencies are in operation at all, and what we see is chiefly the result of the action of those that tear down or destroy.

When we begin the study of a mountain, therefore, we are naturally curious in the first place, as to how this upstanding land feature came into existence. Was it pushed up, or is its ruggedness the outcome of its being torn down? Secondly, we wish to know of what it is composed; and lastly, we are concerned to discover the causes of its particular or peculiar features,—those features that on casual or superficial inspection stand out and appeal to us most strongly.

Thus, in our ascent of Mt. Thielsen, which is most conveniently made from the Diamond Lake (or west) side, the first question to arise is as to the reason for the long, fairly even slopes that stretch from the shores of the lake well up towards the timber line. Careful examination of the environs of Diamond Lake reveals the presence of a succession of terraces around it which apparently represent former levels of the water of the lake. The newly blazed trail which starts from Short Creek, near the southeast corner of the lake, rises across these benches, which are in places boulder-strewn but more generally surfaced with a thick covering of pumice fragments. As we leave the lake and pass above these former shore features, there are bouldery

ridges and heaps, often more or less irregularly disposed, and at intervals croppings of light gray andesitic lava.

Our close-at-hand observations tell us thus far that there is a fringe or apron about the west base of Thielsen made up of a mixture of pieces of rocks that vary in size from clay and sand particles to large boulders. Many of the solid rock surfaces that appear here and there are smoothed and exhibit the parallel markings that are characteristic only of the scouring action of glaciers, which affords the very clue we have been seeking to explain the cover of broken rock detritus over which we have come. It is the deposit—the successive dumpings, as it were,—of the glaciers during their active existence upon Mt. Thielsen's slopes, and while they were progressively melting away toward their final complete disappearance.

Close to the lake these glacial materials are washed into the shape of crude benches or platforms, and both here and above the high water lines have been given a showering veneer—perhaps many veneers—of pumice fragments. Farther up, outcrops of rock increase in frequency, and the glacial debris, though present in quantity, is confined more largely to the bottoms of the various sharp canyons that gash the upper reaches of the mountain. We are thus strengthened in the suspicion that the body of the mountain is of beds of volcanic rock, and that the glacial sediments over which we have been passing are but a mere surfacing in favorable places upon its lower slopes.

Beyond the timber line we come to the talus slopes,—long, steep, unstable inclines of loosened rock fragments of all sizes that are gradually moving downward and are constantly replenished by the crumbling of the cliffs and ledges above. Between these sloughing slopes, sharp rock ridges stand up, which again we are certain are but further surface suggestions of the interior structure of Mt. Thielsen.

Clear of the forest, at an altitude of about 7,500 feet, the entire superstructure of the mountain opens out before us, and we see that, aside from the long, sliding talus slopes and intervening ridges already mentioned, here are several new features, at a distance unsuspected. As one faces the mountain from the west, one cannot fail to notice that the angular skylines of the shoulders that rise towards the pinnacle from both the north and south are due to the outcropping edges of a great series of inclined rock layers. At the south the inclination is steeply in a southerly direction, sometimes almost on edge. On the north side, the dip is to the north, as we get the profile view across a broad talus slope.

The character of these beds can be determined only by the close inspection we shall give them as we rise upon the immediate

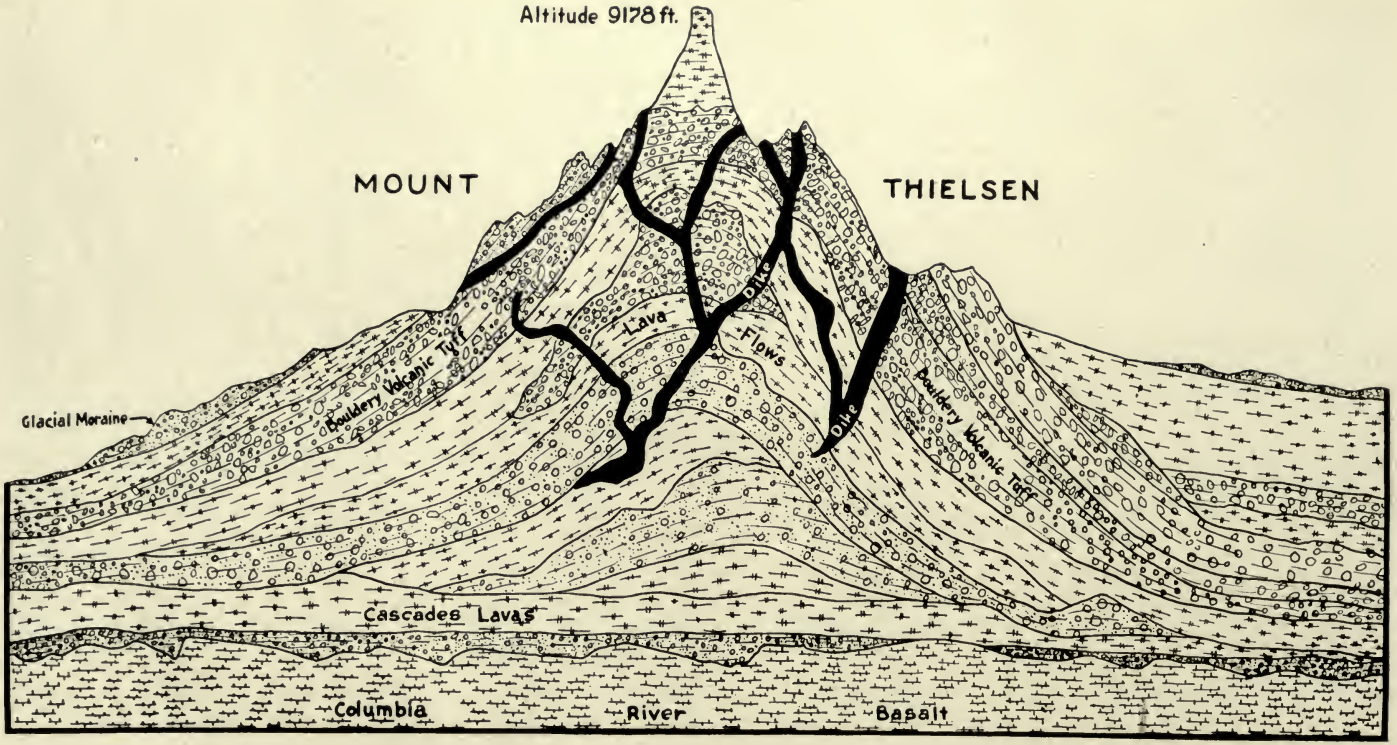
flanks of the summit. And here we see that they are layer upon layer of cindery fragments, some of scoriaceous or clinkered and broken-up lava, bouldery tuff or agglomerate. They are commonly black in color, though red in places, or alternating black, red, brown and yellow where quantities of volcanic ash enter into their make-up. We are interested to find also that at the west base of the pinnacle, the side from which our approach is made, these beds dip away from the peak and *to the westward*, as though (which is apparently true) they are a part of the same broad crescentic apron of volcanic fragments that clings about or leans against the entire north, west and south slopes of the mountain's summit.

These fragmental materials do not continue to the top, but give way, as we rise, to a larger proportion of (and at last, entirely to) bodies of hard jointed lava. The summit pinnacle, which by those whose aspiring efforts have taken them to its base but not to its beetling top may perhaps more properly be termed a spire, is of blocky, dark gray lava. It is obviously a small remaining portion of a much larger body whose former extent we do not know, but which has so resisted the denuding forces of the weather that today it is the crowning point of a massive mountain peak. Nor do we know how much more massive it may have been in the not distant past; it could scarcely have been more precipitous. But we can see that Mt. Thielsen is the spectacular landmark that it is today because the surrounding rocks have yielded so much more readily to the tearing down forces than has this lava of its top; which leads us at once to the correct inference that many of those beds which dip away in all directions formerly extended far up,—some doubtless much beyond the present position of the summit of the mountain.

In other words, we are studying a peak in the Cascade Range all of whose conspicuous features have been produced by the denuding or tearing-down processes. The fact that every rock to be seen in its structure has come directly from eruptive volcanic action is strong evidence as to how it was built up in the first place. And the manner in which the highest parts at present are flanked by beds whose upward extension has been eroded away indicates further and very vividly that we are now looking upon a mountain which is but what is left of a land elevation once of immensely greater magnitude. It is not a particularly depressing thought, though at first a rather startling one, that Mt. Thielsen is thus but the remains of a once much greater mountain, some of the deeper parts of whose skeleton or framework now protrude because less resistant parts of its structure have crumbled down and been swept away.

Photograph by Ira A. Williams

Mt. Thielsen, from western ridge. Inclined beds of tuff, scoria, and ash cut by narrow dike of lava at left; beds of similar fragmental volcanic rocks in foreground and standing nearly on edge at the right. The pinnacle is of hard jointed lava.



Cross-section showing probable structure of Mt. Thielsen

What the former size of this mountain was, or what were the dimensions of the mountain of which our Mt. Thielsen of today was a part, it is rather difficult to conceive accurately. But we cannot study its upper slopes for any time at all before discovering still more interesting evidence of the probable character of its origin. Cutting across in many places the bedded tuffs, remnants of which cling against the higher slopes, are relatively narrow bands of volcanic lava. These are called dikes, and are the filled fissures or cracks through which the lava broke upward, often forcing its way we do not know how many vertical feet to the surface. In places, these dikes thin or even taper out; again they broaden or fork into two or more branches. Sometimes they temporarily follow along the planes of bedding, or intersect these planes at a low angle for some distance, then change again to almost directly across the formation.

In places, and particularly where individual dikes are a few feet or more in width, they possess a dense glassy texture at and close to the side walls and become porphyritic or more granular in the interior. This fact, among others, is a most decisive clue to show that these openings, which are now filled with solidified lava, were made through beds of rock which, though themselves volcanic in nature, were already cold and hard. For the glassy texture is always the result of comparatively sudden or rapid chilling and hardening of a molten rock, and the extent to which the texture varies from the dense or glassy is usually considered as indicating the slowness of the cooling process.

And what is the meaning of the presence of these dikes? First of all, as already suggested, they represent the courses through which lavas passed upward towards the surface after the parent mountain was already in existence. It is obvious that in forcing a way up through the overlying beds, lines or planes of least resistance would be sought out, and the position of the dikes thus indicates the directions of easiest movement in those early days. Upward, the dikes can in most cases be seen to have been cut off by the erosion and crumbling of the mountain sides. Apparently some of those farthest up led into and were probably the source of the lava flow of which the surmounting pinnacle of Mt. Thielsen is a remnant. To how much higher altitudes some of the dikes may have extended originally, to connect with the resultant surface flows, we can only estimate or guess. The filling of some probably never reached the outside, and thus today do not and never did connect with a bed of lava above.

On the other hand, it is a natural thought that the molten lava must have been under very severe pressure to be able to find its way across, or break up through, the layers of already cold and oftentimes

hard rock that formed the superstructure of the mountain. What, then, may have been the source of this lava? Where was the chamber or reservoir which supplied it? Efforts to trace the exposed dikes downward into the mountain, or down its slopes, appear to indicate that they do not extend to any depth into the substructure of Mt. Thielsen. Their occurrence suggests the probability, on the other hand, of their being limited to but the upper few hundred feet. Since their filling thus apparently did not come directly upward from a reservoir of supply beneath, we are led to the inference that they must have connected with a source in some lateral direction.

The make-up of the mountain, as far as can be seen, is such as to indicate that its upper portions, at any rate those which the dikes are observed to intersect, have come to their present position by volcanic eruption, largely explosive activity, from a vent somewhat to the eastward of the present mountain summit. The exact situation of the vent from which came the lava, scoria and the tuff and agglomeratic beds of Mt. Thielsen can only be ascertained by further study of the region. But their attitude and character suggest, if they do not fully prove, that our peak and the bulk of its structure are a much eroded portion of the rim and westerly slopes of a former crater, the center of which was to the east of it. From this crater came both the fragmental and flow lavas that compose the mountain, and from a source which is most easily thought of as being directly, and at no great depth, beneath the crater, of the rim of which the present-day Thielsen was part. We do not see today this former crater's core of lava. Nor are other parts of its rim in conspicuous evidence. But the inference would naturally be that both the rim and dike fillings came from the same source, the latter in particular pressing up into and breaking the side walls of the crater after its main eruptive activities were over, and at least the surface portions of its filling had solidified into a body of resistant rock.

The position and attitude of the dikes thus likewise harmonize with the other evidences that Thielsen is what remains after erosion to the present day of the westerly rim of the former crater of a volcano. Of the dimensions of this volcano we know little, except that, from the bulk of this one of its wasted remnants, it would appear to have been of considerable magnitude. It is apparent also that, following the close of active eruption, the column or body of molten lava in the crater subsided to such a depth that today we do not know exactly where the volcano stood.

All these facts remind us again that although the composition and structure of our Oregon mountains that stand along the summit of

the Cascade Range are due to the effusion and heaping up of volcanic materials, their present-day features or conspicuous peculiarities are as likely to be the result of the denuding or tearing down action of the weathering agents,—water, wind, snow, ice and the weather itself. Mt. Thielsen doubtless differs very much from its original condition as a part of the crater rim. It has suffered greatly from the operation of all of the tearing-down processes. It was set upon and eaten away by the glaciers. And that probably all happened prior to the scattering about of pumice fragments by the vigorous eruption of Mt. Mazama or the Crater Lake volcano, fifteen miles to the southward, inasmuch as there is today a scattering of pumice fragments upon Thielsen's slopes everywhere and well up toward its summit, where these have not been removed. It thus seems apparent that it came into existence at an early time, as compared with many of the other main peaks of the Cascade Range. Its distinctive features are the result of a process of modification of its former outlines, and loss of bulk as time has gone by since it ceased to grow. All of which in Mt. Thielsen has left to us—and we need feel little concern as to its permanence throughout generations to come—one of the most instructive, typical and spectacular of mountain peaks in the entire Cascade Range.

□□□

Ever since I entered the woods, even while listening to the lesser songsters, or contemplating the silent forms about me, a strain has reached my ears from out the depths of the forest that to me is the finest sound in nature,—the song of the hermit-thrush. I often hear him thus a long way off, sometimes over a quarter of a mile away, when only the stronger and more perfect parts of his music reach me; and through the general chorus of wrens and warblers I detect this sound rising pure and serene, as if a spirit from some remote height were slowly chanting a divine accompaniment. This song appeals to the sentiment of the beautiful in me, and suggests a serene religious beatitude as no other sound in nature does. It is perhaps more of an evening than a morning hymn, though I hear it at all hours of the day. It is very simple, and I can hardly tell the secret of its charm. "O, spheral, spheral!" he seems to say; "O, holy, holy! O, clear away, clear away! O, clear up, clear up!" interspersed with the finest trills and the most delicate preludes. It is not a proud, gorgeous strain, like the tanager's or the grossbeak's; suggests no passion or emotion,—nothing personal,— but it seems to be the voice of that calm, sweet solemnity one attains to in his best moments. It realizes a peace and a deep solemn joy that only the finest souls may know.

—*John Burroughs.*

Crater Lake *in* Winter

By Merrill Arthur Yothers

About his ragged rim the mist-veils creep
And fall Niagara-like into the blue;
The ghostly winds among his towers sweep
And sigh and moan the dismal season through.
When storm and darkness fold the lake in night,
Behind chill shoulders of torn sentinel peaks,
There moans a spirit through the murky light;—
The spirit-ghost of old Mazama speaks.
And all night long, the while the furies roar
And rage with dismal, undiminished grief,
The sapphire billows clamor on the shore,
And whispering in sorrow seek relief.
So does Mazama's spirit after death
Return in fury in the storm wind's breath.

Bird Life *of the* 1921 Annual Outing

By Edmund Bidwell

Passing from our evergreen landscape of the coast ranges into the semi-arid country beyond The Dalles, those of the Mazamas making the daylight trip through the Deschutes canyons were interested in the birds rarely or never seen in the Portland district. The magpies, with their handsome black and white plumage, were seen in flocks along the stream. The mourning dove was also plentiful. The osprey or fish hawk knows a good fishing stream as well as any disciple of Isaac Walton, and several of them were seen hovering over the Deschutes with fish in their talons. Fishing was evidently good with them, for they seemed in no hurry either to eat their fish or depart with it to their nests. It may be of interest to state that, unlike the kingfisher, the osprey catches with claws instead of beak. Folding its wings close to its body, it plunges into the water, sinks its talons into the fish, and, rising from the water, carries the fish, head forward, with both feet.

A shrike or butcher bird was observed within a few feet of the train, as it stopped at a station. It is noted for its fearlessness. Its popular name is typical; for, like the butcher, it hooks up its meat for future use. It will impale grasshoppers and beetles upon the barbs of a fence or the thorns of a bush. One writer has said: "In spite of all accusations, the shrike probably impales his victims less because of original sin than because of original scarcity of supplies, and only a short time ago was seen by a California observer returning to his catch and eating it with marked relish."

At Crescent and Diamond lakes birds were more familiar, and a flock of kinglets and nuthatches kept company with us to the timberline during the climb of Diamond Peak. The herring gulls and occasionally some other aquatic bird added a touch of life to the lakes, and those visiting the little island in Crescent Lake were amused by a family of baby sandpipers, sometimes called "teeter birds," as their antics suggest difficulty in keeping their balance. They are not to be confounded with the water ouzel, that bird of the mountain streams whom all Mazamas know. It too has a dancing or winking movement when upon rock or ledge for which the naturalist finds it difficult to account.

Mr. Glisan reported seeing a pair of young bald eagles at Odell Lake; and Mr. Montague and some others of our party saw what was probably the rosy finch, which follows the snow-line. The cassins and

purple finches were visible in the tree-tops at Crescent and Crater lakes.

Those awakening early in the morning of our over-night stay at Spring River were rewarded with the song of the hermit thrush. What a charming song it is! And how typical of its name was the beauty spot which the singer had chosen for itself, far from the haunts of man! Mr. Stanley Jewett, having supervision for the government of the killing of predatory animals in Washington and Oregon, speaks of the pleasure this song bird afforded him in the early years of his life in the wilds of Oregon. He considers it the sweetest singer of our woods. This thrush is with us in winter, but is rarely seen or heard.

The nutcracker or Clark's crow, discovered by Lewis and Clark and named after one of them, was to be seen both on Mt. Thielsen and at Crater Lake. Its body is ashy gray, with white outer tail feathers and its wings and bill are black. Its rattling "Karr, Karr," lent additional interest to the mountain-sides. This bird and the rosy finch are both associated with the mountains in the minds of all Mazamas.

The mountain bluebird was noticeable around Garfield Peak and other points near Crater Lake. It is light blue in color, unlike our bluebird of the Willamette Valley, and is not common.

It must be said of Diamond Lake that its shores seemed a veritable haven or paradise, not merely for frogs, but for many kinds of young birds. Thirty species were counted by the writer in a short morning walk between Camp Williams and the west end of the lake. Almost a dozen humming birds were seen in a patch of wild flowers about the size of a city lot. Undoubtedly Mr. Sparrow, superintendent of the Crater Lake National Park, is right in contending for the addition of Diamond Lake to the park, if only for the purpose of protecting wild animal life.

About fifty varieties of birds were identified during the journey, but this article mentions only those which were characteristic of the country which we traversed. July and August are poor months for bird study. There is but little song, for the older birds are either moulting or busy with family cares; yet this trip furnished opportunities for the study of some interesting species of the feathered tribe, giving a touch of life to a varied panorama of scenery rarely if ever equaled in a summer's outing.

Courtesy of Willard A. Eliot

1. Hermit thrush. 2. Northern shrike. 3. Osprey. 4. Clark's crow or nutcracker. 5. Magpies

Views in Paradise Park, Mt. Hood

Photographs by Mr. and Mrs. John A. Lee

Paradise Park *and the* West Side *of* Mount Hood

By JOHN A. LEE

This account has to do with an anomaly. On July 19, 1894, the Mazamas were organized on the summit of Mt. Hood. In the twenty-seven years of their existence as a club, they have explored nearly all scenic places of note in the Pacific Northwest, south of the Canadian border. Except in the Olympics, which as yet they have never visited, there is scarcely a prominent snow-peak upon which their record box does not rest, from Mt. Baker on the north to Mt. Shasta on the south.

But Mt. Hood, the scene of the Mazamas' birth, is still foremost in their thoughts. It has held this place even though, in respect to the beauty of its parks, it has been thought not to compare with some of the other mountains. Mt. Hood is peculiarly their mountain. Each year they have returned to this their devoted shrine, either officially and in numbers or in smaller groups. For many seasons they have conducted the timid neophytes up its snowy steeps to qualify them for membership in the club. Invariably these trips have followed one or the other of the two beaten paths,—either up the south side by way of Government Camp or up the north side from Cloud Cap Inn. Strange as it may seem, never has an organized expedition of the club penetrated to the western slopes of the mountain. Still more strange does this appear when it is considered that this is the side that we see from Portland, and the side, too, that presents by far the most symmetrical and imposing contour.

Extending along the whole west base of Mt. Hood lies the Bull Run Reserve, from which the public is most scrupulously barred. This presents a barrier to any westerly approach to the mountain. But this fact explains only in part the other striking fact to which the reader's attention has been directed; for the westerly alp-lands of the mountain—the portions of the slope where snow and timber meet—may be reached by several different routes, without having to pass through any part of the Bull Run Reserve. For the situation thus presented there is no adequate explanation. It is, indeed, an anomaly.

For years the writer has studied from afar the great expanse of glacier, cliff and canyon that is a familiar though ever-inspiring sight to every Portlander, and has longed to obtain a close-up view,—to set foot upon and to explore those rugged western slopes. In recent years occasional reports have come in from hunters and others that hidden away on this west side was the real beauty spot of Mt. Hood,

a Paradise Park rivaling in attractiveness the famed Paradise Park of Mt. Rainier. These reports served to intensify the writer's longing. No question about the park's existence,—for there it is, on the map, with the name spelled out in good-sized letters. Whether or not the thing itself would, in the writer's opinion, belie its name remained yet to be determined. This summer his ambition was realized; though, on account of unfavorable weather, his explorations were not pursued quite to the extent hoped for.

On the Thursday preceding Labor Day, 1921, Mrs. Lee and I left Portland on the Government Camp stage, having stored in our packs camp equipment and provisions for five days. We had the stage put us off at Twin Bridges, which is half-way between the old toll gate and Government Camp. It was 2 p. m. by the time we had partaken of a hurried lunch.

Our route lay up the divide which separates Big Zigzag River from Lady Creek, a northeasterly course, almost directly toward the summit of the mountain. Our immediate task was to negotiate an abrupt rise of several hundred feet, which would put us out of Big Zigzag Canyon on to the crest of the ridge. This we accomplished, after some little difficulty in picking up the old sheep trail that the map shows. This pitch proved the steepest and in fact the only very steep portion of the climb up to our destination. Once on the summit of the ridge, the trail grew better and indeed became quite well defined, as some sheepmen's horses had been over it recently. For the first mile the trail led through second growth timber; then it suddenly emerged into an open burn, where a fine view of the mountain was obtained. The second two miles were through this burn with the grade quite moderate. On our right the ridge dropped off precipitously into Big Zigzag Canyon, here very deep, with the windings of the Government Camp road plainly visible across the canyon. At our immediate left an easy slope led down to Lady Creek, while off beyond the jagged crest of Zigzag Mountain formed the horizon line, some two thousand feet above us.

At the third mile we entered big timber and there lost the footprints of the horses, which doubtless had gone down to the sheep-camp which, later in the evening, we located on the banks of Lady Creek. Here too the ridge trail appeared to end, though we noted that an occasional tree was blazed as we made our way up through the forest. We were careful to keep well on the summit of the divide. After a mile or more of hike through the forest, which we found free of undergrowth, affording excellent going though the grade was steeper than it had been in the open, we realized that night would overtake

us before a timber-line camp could be reached. So we decided to make camp at the first likely place that offered, which meant, of course, at the first water. Turning off the ridge sharply to our left. we again came out into the burned country and just at the edge of the timber descried a lusty spring, one of the feeders of Lady Creek. As luck would have it, all about this spring and along the brook which flowed from it were huckleberries galore, big blues and blacks, just in their prime. There was not time to do more than sample these free offerings of nature, delectable alike to the palate of bears and humans, for the sun had disappeared behind Zigzag Mountain and camp must be made. Our last impressions as we dropped off to sleep were of the murmurings of the brook and the distant tinkle of horse bells wafted up from the sheep-camp in the valley below.

With breakfast over, of which, needless to say, the aforementioned fruit formed a generous part, we shouldered our packs and again took to the timbered ridge. Douglas fir was no longer to be seen, and in its place were noble and lovely fir and western hemlock, for we were getting up. Soon it began to drizzle, and rain-capes were got out from the packs. For the first hour the forest presented little change; then occasional alpine fir and mountain hemlock appeared,—unfailing outposts of the high country. With the appearance of these old-time friends, familiar to all mountain lovers—the former unmistakable because of its spire-like crown and the latter by reason of its star-like foliage—our expectancy grew, for Paradise Park, our goal, should be just above us.

Soon, very soon, the forest opened and we came out into grassy glades. Little patches they were. at first; then, as we proceeded, they became larger in extent. Such delightful glades they were too, with the grass as thick and lush as one might wish and wild flowers everywhere: avalanche lilies, lupines, asters, yellow composites of several species, Indian paint brush, calochortus, polygonum,—indeed all of the species that lend such attractiveness to our mountain parks. The Indian paint brush, polygonum and lupines were so very plentiful that they served to dominate the landscape and hence the general ensemble was of red, white and blue. Now we knew that our goal had been reached. This was Paradise Park,—no mistaking it; truly an American park,—for was it not displaying the emblematic colors? It was difficult for us to realize that we were on the slopes of Mt. Hood; for the surroundings were so very unlike those portions of the mountain to which we had been accustomed, and were so much more attractive. We could well imagine that we might be in Paradise Park on the south

side of Mt. Rainier, in Buck Creek Pass of the Glacier Peak country or, except for the absence of lakes, in Jefferson Park of Mt. Jefferson.

For half a mile or more we ascended, becoming more and more impressed with the surpassing beauty of the park. Then, gradually, the clumps of trees became separated by wider spaces of meadow and at last entirely ceased, though at the very edge of the timber-line the trees were of goodly size. The grass extended up the mountain a full half-mile beyond the extreme limit of trees, a quite remarkable condition, for on most of our mountain slopes a stunted mountain hemlock, alpine fir or white bark pine—most frequently the latter—gnarled and bent by storms and the weight of the winter snows, stands as a grim sentinel to mark the high line of vegetation.

Much of this, our first day's exploration of the park, was carried on under difficulties, for the drizzle of the morning developed, ere we had proceeded far, into heavy showers, which compelled us at intervals to seek the friendly shelter of the trees. Even during the pauses in the downpour the mountain was so enveloped in cloud-mist that our vision was much circumscribed, and at no time did we catch a glimpse of the summit. Our exploration this day was, for the most part, altitudinal, being only to a small extent lateral, though we were able to see that Big Zigzag Canyon was the eastern border of the park and that a stream which we took to be Lost Creek descended in a parallel course a short distance to the west. We discovered also that two branches of this stream had their junction directly opposite the spot that we finally selected for our camp and that in the eastern branch, just above the junction, there was a fine waterfall, a hundred feet or more in height. Above this fall the canyon walls of the stream averaged possibly fifty feet in height and were so steep as to be almost precipitous, though at the top of the fall an easy crossing was found. In a beautiful grove up on the plateau, across the stream, were the remains of an old sheep-camp, apparently not used in recent years. Where the sheep had been kept in corral the polygonum was so luxuriant that it had fallen and become matted, much as red clover does when very rank. Along the borders of the stream the showy blossoms of mimulus, the purple and yellow species intermingled, were nodding in the breeze, presenting an array of color as brilliant as in any garden.

Satisfied to wait for better weather to pursue further our exploration of the park, we proceeded early to make our camp. The site we selected was in a thick copse of trees where the ground was still quite dry, on a bench below the more exposed portion of the ridge, and where we hoped the summit of the mountain would be open to view when the weather cleared. A fine spring, sufficient for our needs,

though scarcely adequate for a considerable party, trickled from the ground a few feet from our camp. Firewood was plentiful and handy, as were also boughs for our bed. The elevation here we judged to be about 6,000 feet.

The faithful silkolene fly, which had come in good stead on many a previous trip, was pitched and staked down with care; for the wind rose as daylight waned and grew quite chill, giving promise of more serious storm. Our forebodings were not slow of realization. Scarcely had the evening meal been finished when Boreas swooped down in all his vigor, flinging at us this time not rain but hail and snow, and with a fury that threatened to carry away our shelter. Fortunately for us it held, but before we could block the end of the tent, using our rain-capes for the purpose, the bed within was white with snow. Thanks to the rain-capes and an abundant supply of safety-pins, we soon had the windward end of the tent effectually closed. We shook the snow from our bed; and then, snug on a thick mattress of boughs, we bade defiance to the elements.

Through all that night and until noon of the following day the storm raged without intermission, though early in the night the snow turned to a mixture of snow and rain. The trees above were leaking like a sieve, and the big drops came down, thump, thump, upon the tent. But, thin as is the material of which the tent is made (it is nine feet by ten and weighs only two pounds), so close is its weave that not even a spatter was felt upon our faces. In sleeping-bags without the additional tent covering (unless possibly those made of heavy aquapelle, which are too heavy to be carried on a knapsack trip) we would have been a wet and bedraggled pair. As it was, we and all our effects kept perfectly dry. Without any doubt, in knapsack camping under such conditions the silkolene fly's the thing.

So incessant and violent was the downpour that until the storm ceased, which it did all at once, there was no venturing from the tent, much less trying to start a fire. The few square feet of space which the tent covered represented the only spot in all that region that was not absolutely drenched. But about noon, almost as if by magic, the clouds separated, the sun came out bright and warm, and there right out of the front of our tent and so very near that it was almost startling, loomed the white summit of the mountain. What a transformation! It would be difficult to imagine one more complete. Our world had suddenly become much enlarged. And if it had been pleasing in the gray mist of the previous day, how much more pleasing was it now, with the bright sunlight creating long vistas of alternate light and shadow between the avenues of trees, and each blade of

grass and flower stalk hung with iridescent pearls. Though the physical man was clamoring for sustenance, for it had been eighteen hours since we had dined, we could not refrain from spending some time reveling in the scenes about us, and the little kodak was put to use.

In the afternoon our explorations were resumed. First, we made careful examination of the immediate vicinity to see what evidence might be found of previous camping parties. One or two old camp-sites were noted in addition to the sheep-camp, but none at all of recent months or even of recent years. Then we again crossed over to the sheep-camp and from thence went on west beyond the westerly branch of Lost Creek. Here we came out into quite a distinct portion of the park,—a broad plateau extending northerly to the canyon of an unnamed fork of the Sandy River, the fork which is fed mainly by Reid Glacier. Just across this canyon and more than a mile away rose abruptly the great Yocum Ridge, park-like and attractive as viewed from where we stood, extending down into the Bull Run Reserve and upward almost to the summit of the mountain. Yocum Ridge is a very conspicuous feature of the mountain's westerly contour and stands out prominently from as far off as Portland. It is the giant hog-back which appears to separate this west face of the mountain into almost equal parts. With the eye we could follow the thread of Lost Creek and the unnamed fork of the Sandy as they descended to join the main stream of the Sandy, the former making from its source a wide bend to the west and skirting with its lower reaches close to the northerly base of Zigzag Mountain, just as does the latter the southerly base of Yocum Ridge, with Slide Mountain between. Far off across the Sandy Canyon, in bold panorama, lay the whole of the Bull Run Reserve, ridge succeeding ridge and all dark green with their forest covering. Away to the northwest, Lost Lake could be seen; but a lofty divide intervened to hide completely any view of Bull Run Lake. Nestling on a high shoulder of Zigzag Mountain, Burnt Lake thrust itself upon our vision as the afternoon sun was reflected from its surface.

Having noted and stowed away in memory's storehouse the topography of the distant landscape, we spent the remainder of the afternoon in making survey of our more immediate surroundings. This portion of the park is quite different from that east of Lost Creek. For the most part it is devoid of trees, though possessing many charming features in addition to the splendid outlook that it affords. Springs that were the sources of good-sized rivulets poured from the ground in numerous places and there were many heath-clad and flowery

dells. The heather was just passing out of bloom and only the purple species was observed, although the white heather also may have been present. Right in the center of the plateau, entirely separate from any other feature of the landscape, there rests a very large and conspicuous boulder, a picture of which is shown, with Mrs. Lee standing on its top. It has been split in twain by the action of the elements, and in a little niche on the larger portion a white bark pine has taken up its abode, gathering such sustenance as the niche affords.

We decided that the morrow should be spent in exploring Yocum Ridge, and perhaps also, if no serious difficulties should be encountered, some of the country still beyond. Over across Yocum Ridge there lay, as we knew, some of the most rugged country of this great west side, including Sandy Glacier, which we especially desired to see. From our reconnaissance we concluded that a direct approach to Yocum Ridge would be well-nigh impossible, because of the precipitous character of the further wall of the canyon. To descend and make the approach from below would mean the loss of too much elevation. The alternative was to head the canyon by climbing well up to the snout of Reid Glacier, which route, if feasible, would bring us out on the summit of the ridge just above the timber-line. Having decided that this latter should be our course, we returned to camp.

The following morning we awoke to find a dense fog enveloping the whole mountain-side,—not a very propitious opening, certainly, for a day to which we had looked forward with keen expectancy. But this bit of exploration must be carried out on this day or not at all, since we had other plans for the morrow. So, packing up some lunch, we started out, hoping that the fog would lift. Thick as it was, we had no difficulty in finding our way to the brink of the canyon of the unnamed fork of the Sandy. With the canyon itself as our guide, we plodded on and upward through the fog until we were stopped by cliffs and seracs. To go on under such conditions, not knowing just what we might encounter, would be folly. Besides, there would be little satisfaction in doing so unless the fog should lift. There was nothing to do but wait or else turn back. We did the former until our teeth began to chatter, and then reluctantly retraced our steps.

The remainder of the day was spent in inspecting somewhat more minutely than we had been able to do before the lower levels of this westerly portion of the park, and in gathering low-bush huckleberries, which are peculiar to the high park regions of our mountains. This variety is seldom to be found in quantity, but in flavor it is unsurpassed. On our way back to camp we dropped down into the canyon of Lost Creek below the falls, and almost though not quite came upon a deer,

which, judging from the freshness of its tracks, had crossed the canyon just ahead of us, startled doubtless by our coming. The canyon was here quite deep—two hundred feet or more—with grassy slopes and flower-bespangled bed, a delight to the eye.

After we had retired that Sunday night, and as we were about lapsing into unconsciousness, we were suddenly aroused by the jingling of bells and the tramp of heavy feet. As we leveled our "bug" in the direction of the noise, four horses went scampering off, much startled by the unexpected light. Attracted by the fine forage, they had come up from the sheep-camp two miles below, though all were chain-hobbled on both fore-feet.

The morning of Monday dawned clear and crisp. The meadow was white with hoar-frost and the ground frozen hard. On this day we must begin our homeward journey, which we planned should be a cross-country hike to Government Camp, with Hidden Lake to be the site of our bivouac for the night. It had been reported that the waters of this lake might be made to yield a mess of trout. Much did we regret not being able to spend another day in the park, for we were keen to make a second try at Yocum Ridge. Fully realizing that some rough going lay between us and our night's camp and that a full day might be required for the trip, we nevertheless went back and took one more look at the ridge, so as to be quite certain that our selected route of approach was, with suitable weather, a practicable one. We became fully assured that it was.

Hurriedly striking the tent and making up our packs, we bade adieu to this cosy camp, one of the most charming and delightful in all our mountain experience. To follow our selected route of descent meant first that we must negotiate a crossing of Big Zigzag Canyon. As to the difficulty of the task we had no illusions as we stood on the brink and gazed down into the depths. How deep it is here, I do not know. My guess would be a thousand feet. The westerly slope, though very steep and only sparsely tree-clad, affords good footing. Not so the easterly wall. So abrupt is its rise, or, where less abrupt, so dense is its covering of undergrowth, that the ascent, especially, presents something of a problem. It took us two full hours, with our packs, to effect a crossing, though we might have fared better had we crossed a little farther down, thereby avoiding the necessity of heading several fingers of the canyon which put into the main canyon at this point and which had not been visible from the westerly bank. Once across, we kept an easterly course through the forest until Little Zigzag Canyon intercepted our path. Then, with this canyon as our guide, we descended rapidly, finding the going excellent in the main,

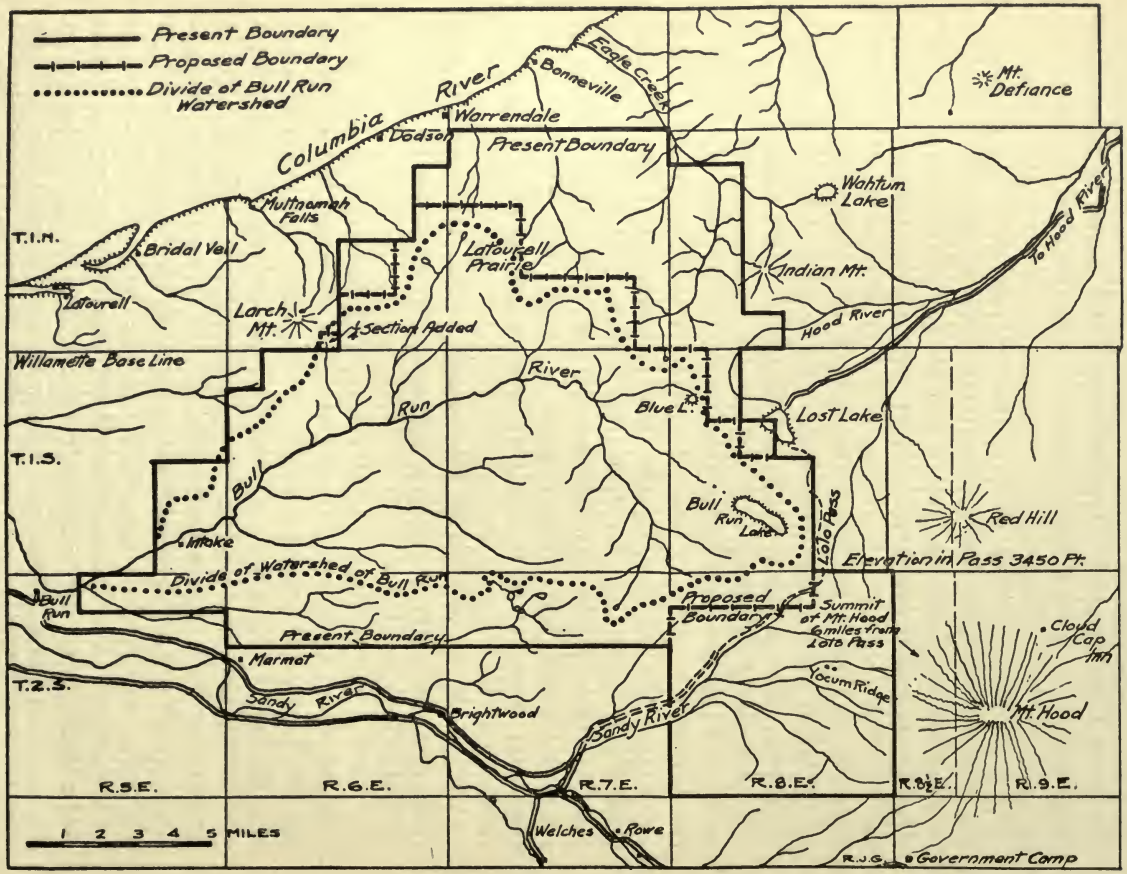
though having to make occasional detours to avoid thick patches of underbrush. Just at nightfall we located Hidden Lake, having for the last mile passed through a veritable paradise of huckleberries. Fish were jumping in the lake, but they could disport themselves in peace until the morrow, for darkness was almost upon us and there was no time for dallying.

If, the next morning, a visitor had chanced upon our camp, he might have beheld a scene of aboriginal domestic economy: the "buck" on a half-submerged raft trying to lure the festive trout; the "squaw" clambering along the banks of the lake, pail on arm, in quest of huckleberries. If the visitor had prolonged his stay he would have perceived too that, as regards the relative success of the twain in stocking the family larder, the picture was not untrue to the more common aboriginal experience. For in due time the pail was filled, while the creel—well, it is enough to say that we had trout for breakfast. The number, however, I am prevented by modesty from stating. They were Eastern brook trout.

Passage for this day, Tuesday, had been reserved on the Government Camp stage, and we found our way into Government Camp just in time to catch the stage, crossing the Little Zigzag Canyon at the point where Sand Canyon joins it. Little Zigzag Canyon is a pygmy as compared with its bigger brother, and its crossing presents no difficulty.

Although, on account of the weather, a part of our plans had miscarried, we could say, with the immortal Teddy, that we had had a "bully" trip.

As the reader has perused these pages he doubtless has been speculating as to whether or not Paradise Park would be suitable for the Mazamas' annual outing. We ourselves are well convinced that it would. As a site for a Mazama camp and camp-fire, the bench next above the one on which our tent was pitched is almost ideal in its setting. It possesses practically all of the requirements,—ample space, level ground, beautiful greensward, shade, wood, water, high elevation, nearness and accessibility to the mountain and to means of transportation, and a most wonderful outlook. Facing south, one looks down to the left into the depths of Big Zigzag Canyon, with Government Camp in plain view below; while, off beyond, Mt. Jefferson and the Three Sisters stand out prominently. On the right, the immediate view is of Lost Creek Canyon, with Zigzag Mountain in the middle distance and the lights of Portland showing as night comes on. Facing north, there looms the mountain, a full mile nearer than from Camp Blossom and rising steep right from camp, much as Jefferson



Drawn by R. J. Grace

Map showing proposed revision of boundary of Bull Run Reserve, and proposed road through Lolo Pass

does from Jefferson Park. The route of ascent would be to head Big Zigzag Canyon, cross Zigzag Glacier, which appears to offer little difficulty, then swing over to Crater Rock, and from thence follow the usual south side route. The climb should be a full hour shorter than that from Camp Blossom and much more interesting. The packing distance from Twin Bridges is scarcely more than six miles, with easy grade and excellent footing for the horses.

Would there be objects of interest and fields of exploration sufficient for a two-weeks' outing? Again we unhesitatingly answer, yes. After one had explored the numerous canyons—picturesque canyons they are—skirted the west side, around as far perhaps as Barrett's Spur, embracing in the order named, Reid, Sandy and Ladd glaciers, all new country to the club, made a trip to Burnt Lake on Zigzag Mountain and participated in the official climb, he would find there would be left little of the two weeks' time to be spent in camp. If perchance he still should find time hanging heavy upon his hands, let him make a complete circuit of the mountain, which, so far as known, no member of the club has ever done. From the standpoint of the club's prestige, it should not delay exploiting this, the least known as well as the most attractive portion of Mt. Hood.

In concluding, I deem it apropos to consider briefly the issue of the Lolo Pass road. It is a live issue and very pertinent to the subject of this article.

Lolo Pass is the lowest point of the divide which separates the head waters of the Sandy River from those of the West Fork of Hood River. The Forest Service has a wagon road projected to connect the Hood River Valley with that of the Sandy by way of this pass. Several miles of the road had already been completed when work was stopped as a result of protest by the Portland water department, on the ground that it would extend through a portion of the Bull Run Reserve, though, in fact, it would not touch any part of the Bull Run watershed.

The people of Hood River as well as others are clamoring for the road to be built, and the Forest Service is willing and anxious to go ahead, but the city still objects. We believe that the city's objections are not well taken and that the road should be built.

This road, if constructed, would serve several very important purposes. It would complete the circuit of roads surrounding Mt. Hood. With the completion of this road and the other Mt. Hood roads now under construction, the tourist could motor entirely around the mountain on a road of easy grade and be in close proximity to the mountain at all points of the circuit. Its scenic possibilities would

be unsurpassed. There would be no other road like it anywhere in the United States, for no other of our snow-peaks has a road completely encircling it. Especially would it open up to view and render more accessible the best portion of the mountain, scenically considered,—the portion of which we have written in this article. Furthermore, as Mr. George H. Cecil, District Forester, well points out in a recent interview published (with map) in *The Portland Telegram*, it would furnish a short route to Portland from Upper Hood River Valley and would much relieve the congestion on the Columbia River Highway. It would not endanger Portland's water supply. A high mountain would lie between it and the Bull Run watershed. In an important respect it would serve as a protection to the Bull Run watershed. For if a fire should break out in the easterly portion of the watershed, and statistics show that forest fires are as likely to be caused by lightning as by campers, fire-fighters could be rushed to the scene in automobiles and be on the ground much more quickly than by any means now afforded.

As a matter of fact, it is high time that the boundaries of the Bull Run Reserve be changed. As at present constituted, they embrace much land on the north as well as on the east that is not within the watershed and small parcels of land not now within the reserve should be added in order properly to protect Portland's water supply. In a carefully prepared article published (with map) in the *Oregonian* of February 11, 1917, Mr. Richard J. Grace, president of the Trails Club, presents in detail and most convincingly the facts of the situation.

So illogical are the present boundaries of the reserve that it is difficult indeed for the most law-abiding citizen to hold them in proper respect. Much of Tanner Creek and Eagle Creek, which flow into the Columbia River, are now in the reserve. The boy scouts cannot hike up Eagle Creek to their cabin at Wahtum Lake without invading the sacred precincts of the reserve, nor can a boatman paddle around the shores of Lost Lake without also being guilty of trespass. Wake up, city fathers, and bring about this much-needed reformation of the boundaries of the reserve, or an educated and aroused public sentiment will demand that you do so. The facts are all against your standpat position. In any event, you should withdraw your opposition to the Lolo Pass road. The Bull Run watershed, both in fact and logic, belongs to the City of Portland, and should be jealously guarded. Not so Mt. Hood,—its scenic west side as well as all other portions. This is the property of the nation and its people, and in due time they will insist that they be permitted to enjoy it fully.

The west side of Mt. Hood, with the Sandy River in the foreground *Photograph by Gifford*

Views of eruptive flow on Mt. Hood *Photographs by George L. Brown*
Upper—Looking from Crater Rock towards Illumination Rock.
Lower—Detail of flow, and Illumination Rock.

Mount Hood *in* Eruption

By T. Raymond Conway

A stranger examining the files of the *Oregonian* for the year 1921 would be very much surprised to find in bold headlines in the issue for August 9, the statement that Mt. Hood had been recently in eruption.

This startling announcement was due to the sudden appearance on the upper portion of Zizgag Glacier of a long, narrow, black streak which perceptibly became longer and wider as it was observed through glasses.

First reports had it that the streak consisted of hot rocks and mud, the intense heat from which made it impossible for the first investigator to approach near enough for detailed observation. Messrs. Chester Treichel and Orval Zimmerman, both attached to the staff of guides at Government Camp, who made the first investigation and report, deny that this was the case, and say that they could detect no warmth whatever, and that the phenomenon appeared to be an upheaval of mud, sand and water, which had enough initial force to lift and shatter blocks of ice from fifteen to eighteen feet thick, and to crack the upper end of Zigzag Glacier for approximately one hundred yards above the actual point where the saturated mass poured forth.

Contradictory statements and the lack of definite facts upon which to base a statement led *The Evening Telegram* newspaper and the Mazamas to join forces and send Mr. A. B. Williams and myself to investigate the phenomenon.

The break from which the mud came was reached at about four o'clock a. m. on August 11, and careful observations were made with the idea of making as complete and detailed a report as possible.

The crack from which the mud issued was about thirty-eight feet long and about twenty inches wide at its widest place, and was evidently caused by some enormous force lifting and shattering the hundreds of tons of ice forming the ice-cap at this point. This pressure was exerted until the break allowed the saturated mass to pour forth, thus relieving the pressure. At the point of egress the upper block was lifted four feet above the surface of the glacier and remained in that position for weeks afterwards.

Strangely enough, although a tremendous pressure was undoubtedly exerted in lifting the enormous weight of the ice blocks, there is no evidence that the mud and sand were expelled by any force other than that of gravity. There was no mud or discoloration on the face of the upper block of ice which marked the point of egress, nor could even

the smallest quantity of mud be found anywhere except in the path of the flow. It is manifest that if the break had occurred with explosive force, mud would have been spattered upon and would have discolored the surrounding ice, including the upper wall of the crack from which it issued.

The mud flow was practically uniform as to width (approximately fifty feet) and stretched two thousand one hundred feet from the base of Crater Rock, down the center of Zigzag Glacier and past Illumination Rock, to a point approximately east of where the swell of the lower angle of Illumination Rock joins the natural angle of the mountain slope.

Successive flows were noted on succeeding days, but the flow did not lengthen, as its lower end was bounded by a crevasse which swallowed up all mud reaching that far; and although I visited this point several times on later climbs, at no time did I notice any considerable amount of mud within the crevasse.

Two explanations have been advanced as to the probable cause of the phenomenon, and they both agree on the throry that the break was caused by gravity pressure and differ only as to the source of the great mass of sand and water which was necessary to produce such an upheaval.

The first theory advanced was that water from the lake of snow water behind Crater Rock and under the east slope of the hog-back, the surface of which is approximately two hundred feet higher than the outlet of the flow, had broken through some rocky fissure in the base of Crater Rock and had poured forth at the lower end of this fissure with such enormous force as to lift the ice cap at the upper end of Zizgag Glacier and spew its mass through the opening thus made upon the steep slope below the break, whence its weight and volume carried it to a point below Illumination Rock.

Another theory was that the water which collected in the pocket formed by the hog-back, Crater Rock and Castle Crags, and which for years has worked its way by some sub-glacial route under Zigzag Glacier, had been blocked by some shifting of the ice mass, and this dammed-up stream had backed up until its force was sufficient to break through the ice. This theory is given added weight by the fact that mud was ejected through three small cracks in the ice, fifty-six paces (estimated at one hundred feet) in distance, directly above the break from which the flow stream issued; and, so far as I was able to observe, mud was ejected at no other place, although hundreds of cracks existed in the ice above the break in question. No cracks existed below it, and no ice-blocks were lifted or tilted except at this one point;

or, if they had been lifted, they had settled back, leaving only a crack on the surface of the ice to tell of the enormous pressure exerted.

The fact that a considerable stream of water can sometimes be heard running below the surface of the ice of Zigzag Glacier, presumably on the glacier bed, is quite well known, and several years ago Elijah Coalman (who was at that time look-out on the summit) and I started to explore the upper end of the stream bed, but were forced to give up our investigation, as we reached our objective at about 11 a. m., at which time rolling rocks made things too interesting to be comfortable. The existence of this stream makes the latter theory more plausible; and, when coupled with Mr. L. F. Pridemore's statement that the lake above Crater Rock has not lowered perceptibly, it seems likely that this is the true explanation.

MOUNTAINEER'S PRAYER

Gird me with the strength of Thy steadfast hills,
The speed of Thy streams give me!
In the spirit that calms, with the life that thrills,
I would stand or run for Thee.
Let me be Thy voice, or Thy silent power,
As the cataract, or the peak,—
An eternal thought, in my earthly hour,
Of the living God to speak!

—*Lucy Larcom.*

The Mount Adams Slide *of* 1921

By FRANK M. BYAM

Mazamas know Mt. Adams. They have climbed to its summit, or have become familiar with it through stories told by friends, and articles written by Lyman, Reid and others. They have, indeed, claimed one of its glaciers as their own. The news of the great slide which occurred on the mountain in May last must therefore have aroused in many of them a desire to visit the devastated area—a desire which came with especial force to Mr. Fred H. Kiser and his staff at the Kiser Studios.

The Kiser party left Portland on June 19, 1921, and spent the first night at Guler, on Trout Lake. A storm on the mountain on the morning of the 20th made an ascent impossible, and the day was spent in visiting some of the interesting lava caves in that neighborhood. On the morning of the 21st an attempt was made to drive up the mountain over the Cold Springs Road; but at an elevation of 5,850 feet, deep snow was encountered and it was found necessary to drop back, and make camp at Morrison Creek, where the party was joined by their packer with the horses.

At 4:30 on the morning of June 22 the members of the party were in the saddle, and at seven o'clock they had reached the slide. Their route from Morrison Creek lay over the southern extremity of Avalanche Glacier and across the ridge between the White Salmon and Avalanche glaciers to a point below the lower end of White Salmon Glacier. From the lower reaches of the slide area they were able to get the very comprehensive view of the slide which appears in the accompanying photograph. The closer examination which was made possible by their travel over the slide-swept ground revealed many interesting phenomena.

While it may not be possible to determine just what caused the slide, conditions favorable to it are found in the steep faces of the higher slopes of the mountain and in the exceptionally heavy fall of snow last winter. And the occasion of it may have been the terrific storm which immediately preceded it.

The slide originated above the head of White Salmon Glacier and about 1,000 feet below the summit of the mountain. For some distance below the point of starting it was confined within a comparatively narrow space between two rock walls. But it soon escaped from this enclosure and, gathering volume and momentum as it fell, spread fan-wise over White Salmon and Avalanche glaciers. In the

The Mt. Adams slide, showing close-up view of devastated area.

Copyright by Fred H. Kiser

Copyright by Fred H. Kiser

View of typical cone found in path of Mt. Adams slide. Note two other cones farther away to the left.

course of its travel the avalanche fell a vertical mile and spread over an area of about five or six thousand acres. A short distance below the point at which the widening process began, the onrushing mass struck the ridge between White Salmon and Avalanche glaciers and was divided into two parts. The larger of these flowed down over White Salmon Glacier, while the smaller followed the course of Avalanche Glacier.

It is doubtful whether the destruction on the White Salmon side is greater than that which took place across the ridge; but it is more readily apparent. It would almost seem as if Saghalie of the Klickitats had been at work here. Whole forests were broken down or uprooted, and the trees ground to bits. Level places became hills. Canyons were filled with debris of all kinds, and the whole face of the mountain was changed.

The ruin wrought on the east side of the ridge was less sweeping than that on the White Salmon, but no less notable. Here the slide appears to have come down in two sections. The first section presumably swept all obstructions out of the way and finally stopped some distance below the lower extremity of Avalanche Glacier. There was then nothing to retard the progress of the second section, which plowed its way through the first, curving slightly to the left, and opening a canal or channel one hundred yards wide by three-quarters of a mile in length. The walls of this channel are about twenty-five feet high. Viewed from a distance, the bottom appeared to be perfectly smooth; but a closer examination revealed a large number of small, perfectly-shaped cones covered with a black substance, scattered over its surface. These cones are the most interesting—as they are the most puzzling—effects of the great slide. The first impression they conveyed was that of a solid heap of some black material. Upon closer inspection it was found that the black covering was in each instance a conglomerate mass forming a layer about two inches thick on the outside of a solid cone of ice.

Many theories have been offered concerning the manner in which these cones were formed, but none of them satisfy those who have studied the cones at first hand. It would be difficult to account for the cones if they were scattered promiscuously over the slide area or where found in comparatively sheltered spots. It is doubly so when they are found in a twice-swept section of that area. A party of scientists visited the spot shortly after the slide occurred, but they do not appear to have published their conclusions concerning these cones; nor, indeed, as to any of the effects of the slide. It would there-

fore appear that consideration of the cones, must, for the present at least, rest in unscientific conjecture only.

Meanwhile, Mazamas who have known Mt. Adams in the past will find much there that is new and richly worth their most careful attention.

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The Mount Adams Outing *of the* Cascadians

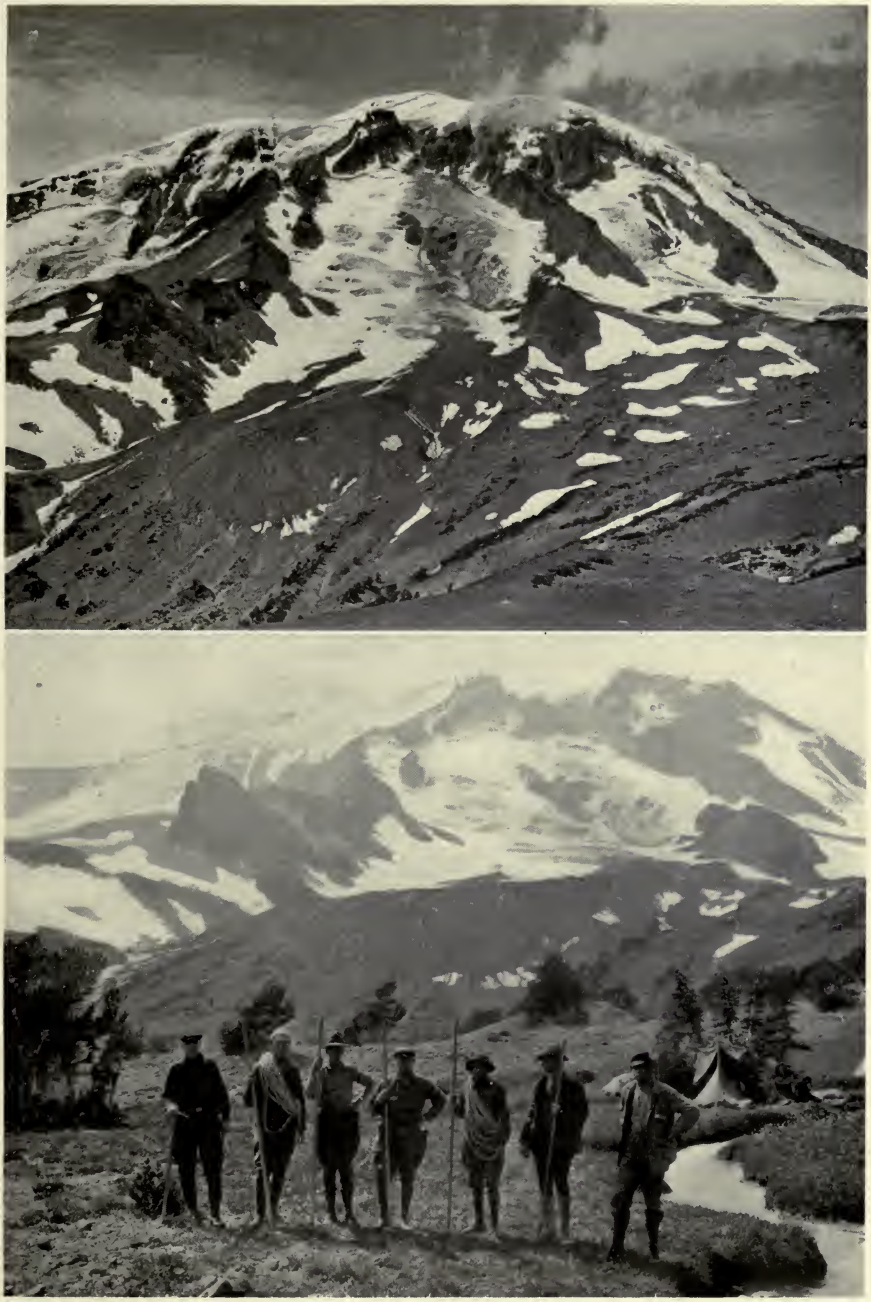
By Edgar E. Coursen

Our youngest mountain-climbing club, the Cascadians, of Yakima, Washington, staged a very successful two-weeks' outing in August, 1921, at Goat Butte, on the east side of Mt. Adams. A seventy-mile auto ride brought us to the Klickitat River, where our first camp was made. Horses carried us across the river next morning, after which the party walked to Mt. Adams Lake for the second camp.

Permanent camp was reached the third day. It was situated in an ideal spot for either large or small parties. We were at an elevation of about 6,500 feet, on the most rugged and picturesque side of Mt. Adams, and within walking distance of Mazama, Klickitat, Rusk, Wilson and Lyman glaciers, and the "Ridge of Wonders."

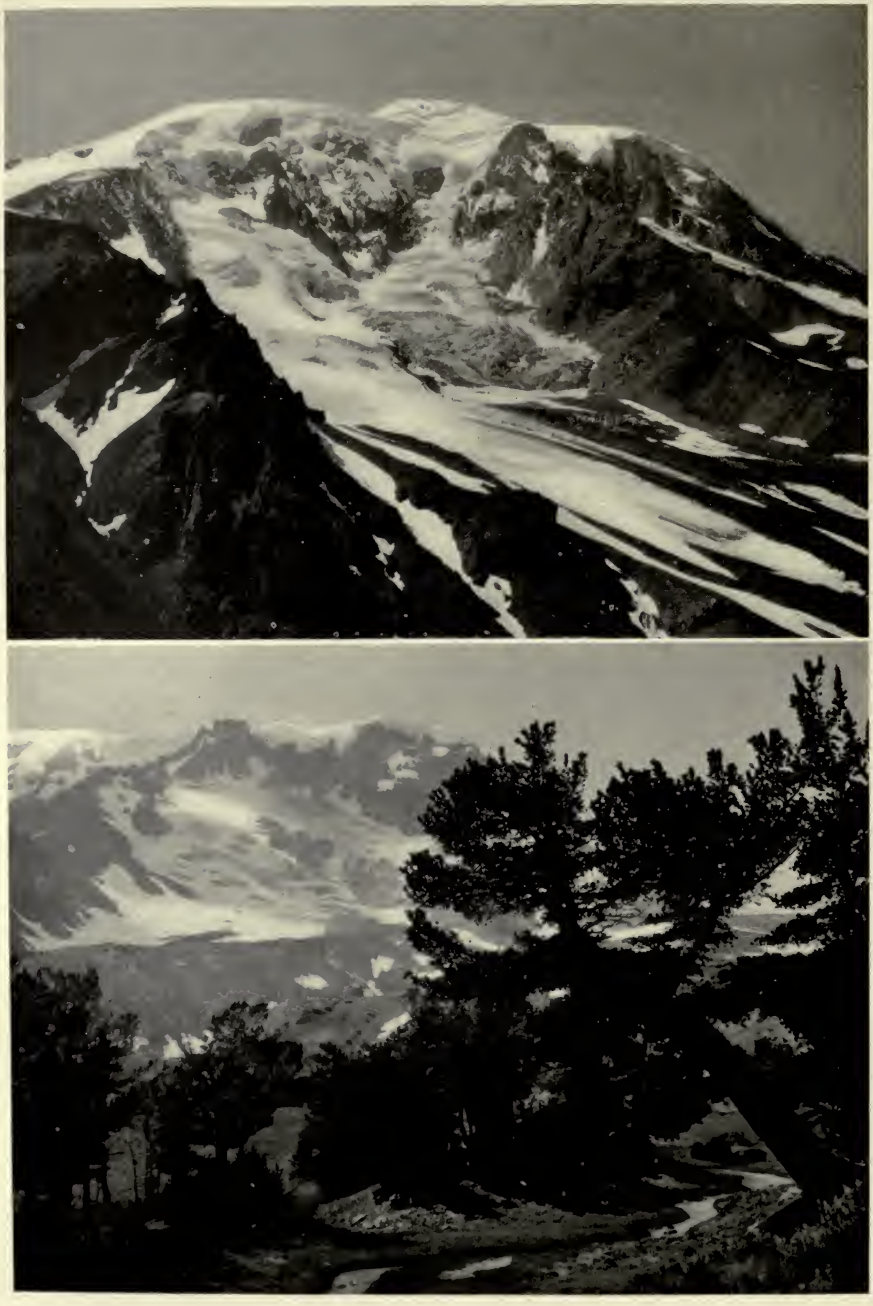
There was plenty of wood and water, including a lake for bathing; also an abundance of grass for the horses, the finest of scenery for the photographers, and no mosquitoes or flies. The packing and cooking crews were in charge of "Ace" Morse and his charming wife; and these important accessories of the outing were conducted to perfection. The outing party proper consisted of twenty persons, of whom four were Mazamas and ex-Mazamas from Portland.

Two one-hundred-per-cent ascents of Mt. Adams were made. One was by a party of fifteen men and women led by Mr. W. E. Richardson, the president of the Cascadians, by way of Mazama and Klickitat glaciers and the south side route. The other climb was made by seven men led by Mr. C. E. Rusk, chairman of the Cascadians' outing committe, and deserves especial mention, as it was the first ascent of Mt. Adams from the east side by way of Rusk Glacier and "The Castle." This climb was both difficult and dangerous. Hitherto



Photographs by Maurice Barnes

Upper—East side of Mt. Adams, from Goat Butte. Lower—The seven who made the first ascent of the east side of Mt. Adams, via Rusk Glacier and the Castle.



Photographs by Maurice Barnes

Upper—Mt. Adams and Klickitat Glacier, from Ridge of Wonders. Rock pinnacle at upper right is the Castle. Lower—East side of Mt. Adams from Camp Rusk.

I have considered Shuksan, Jefferson, and Prouty Peak of the North Sister, our three hardest snow-peaks to climb, but now I believe Mt. Adams from the east is the worst of them all. The seven men making this ascent were Messrs. C. E. Rusk, W. E. Richardson, Clarence Truitt, Rolland Whitmore, Robert E. Williams, Clarence Starcher and myself.

The Cascadians have good reason to be proud of the success of their first big outing and of their first ascent of Mt. Adams from the east.

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The Mountaineers' Outing *of* 1921

By L. A. Nelson

The Mountaineers' 1921 outing was in the Glacier Peak and Lake Chelan region, with Glacier Peak as the main objective. This is the same region which was visited by the Mountaineers in 1910, and by the Mazamas in 1911.

The party left Seattle on the evening of July 29 via the Great Northern Railway, arriving at Leavenworth, Washington, on the following morning. After breakfast at the restaurants, we took the waiting auto trucks for a forty-mile ride along the Chiwawa River, to the end of the road, four miles from the first camp. The road was a series of ups and downs, sharp curves and many bumps. The last part was overhung with branches of the trees growing close to the road, and the party in the first truck composed a song entitled, "Keep Your Head Down, Mountaineers," which received great applause at the evening camp-fire session. The dunnage bags had been sent in ahead of the party and were at camp when we arrived. The cook, the baker, and the cook's assistants had also gone ahead of the party. A hot dinner awaited us and was speedily consumed.

The next day camp was moved a distance of nine miles, with a gain in elevation of 3,000 feet, to Buck Creek Pass, our first main camp, at an elevation of 5,796 feet. This was our main camp for a week, during which time several climbs were made to near-by peaks, and the ascent of Glacier Peak was accomplished. The climb of Glacier Peak necessitated a knapsack trip to a bivouac camp at timber-line on the east slope of the mountain. In 1910 a trail had been blazed over the route, and in 1911 the Mazama party, in making the trip to timber-line, followed this trail. It was rather interesting this year

to find that the old trail was clear and well defined most of the way, and the blazes comparatively easy to follow. The trail was re-blazed this year, to make it easier for other parties who might follow. The trip to timber-line necessitated a loss of elevation of approximately 2,500 feet between Buck Creek Pass and the Suiattle River, and a climb of 2,500 feet from Suiattle River to timber-line. In order to make an easy trip, the party left camp Thursday afternoon and made camp on the banks of the Suiattle River at evening, the next day going from the Suiattle River to timber-line, where we arrived in time for lunch. The greater part of the afternoon was spent in watching the mountain goats on the slope directly across from camp. Late in the afternoon fog began drifting in, and soon it began to drizzle. After an early dinner and a short camp-fire session, the party found refuge in their sleeping bags. The chances for an ascent for the next day looked bad, but with the mountain-climbers' optimism the party retired, some to sleep and some to lie awake, expecting a three o'clock call to breakfast. The drizzle continued all night, and the prospects for a climb in the morning were not bright; however, a start was made at six o'clock by the scouts, and by the main party soon afterwards.

The clouds were so thick that an object twenty feet away could not be seen. At an elevation of about 7,500 feet the clouds became less dense, and then we were soon above them. A wonderful panorama was unfolded, the clouds appearing as a vast sea with the mountain peaks here and there playing the part of islands. There was considerable wind, and the clouds constantly shifted with it, sometimes closing in around us, and again disappearing. It brought to mind a verse by an author unknown to me:

> "O, at the eagle's height
> To lie in the sweet of the sun,
> While veil after veil take flight
> And God and the world are one."

At an elevation of about 8,500 feet we were entirely above the clouds, and from there on had clear weather, but the clouds still hung in the valleys. We reached the summit at about 12:30 p. m., after lunching in the saddle south of the peak. We spent an hour on the summit, with wonderful views of the surrounding region. Mt. Rainier was in sight to the south, but Mt. Adams and Mt. St. Helens were hidden in clouds. To the north we saw Mt. Baker and Mt. Shuksan dominating the intervening mountains and those east of the peaks. Westward, the Olympics were in view, and in the east we had a close-up panorama of the main divide of the Cascade Range. Leaving the

summit, we reached camp at the timber-line in two hours, had a second lunch, packed up, and hiked to our camp on the Suiattle River.

Sunday morning we started for our Buck Creek Pass camp, where we arrived by noon and were welcomed by the lonely left-behinds, who escorted us through an arch of welcome. The next day we broke camp and moved a distance of nine miles to our second camp at Suiattle Pass, where we stayed until the following Friday. Thence several ascents were made, the main objectives being Sitting Bull, Saddle Bow, and Cloudy Peak. At this camp we had quite a number of visitors from the sheep and mining camps. One of the sheep-packers was a native of the Scottish Highlands, and a great admirer of Harry Lauder. In many ways he had Harry beaten, both as to brogue and voice, and he entertained us one whole evening at our camp-fire.

Our next camp was at Lyman Lake, where we stayed practically one week and from which we ascended Chiwawa Mountain. This mountain, though only 8,500 feet in elevation, gave us some of the most thrilling climbing we had on the trip, and incidentally, some of the best coasting. On the last glissade down from this peak, we had a regular acrobatic performance. The party coasted standing up, sitting down, lying down and rolling—feet first, head first, changing ends and turning cartwheels and pin-wheels. It was one of the funniest performances I have ever seen on the snow. The region in which this camp was situated was ideal for individual trips, and the botanists held high revel here. Fishing was also good at Hart Lake, about three miles from camp. There was an abundance of fish in Lyman Lake, but they did not rise well to fly or bait, except on two occasions, when fair catches were made.

Leaving Lyman Lake, the party hiked thirteen miles to what is known as "Seven Mile Camp," on Railroad Creek. Next morning we started early and reached Lyman Lake in from one and a half to two hours, according to the speed of the individual members. The little store at this place probably did a bigger business on this Friday morning than they had ever done before in so short a time. Here our packers left us,—the best packing outfit we have ever had. Our pack-train consisted of twenty-three pack-horses and four saddle-horses, one for each of the packers. On the days on which we moved camp, the pack-train was saddled and ready for packing before breakfast; and it was usually at the next camp before the main body of the party.

From Lucerne we took the speed boat "Cascade Flier," operated by the Lake Chelan Boat Co., to Field, at the head of the lake, and then back down to Chelan at the lower end of the lake, arriving that afternoon. Little need be said of the beauties of this lake. To my

mind, they cannot be described. The lake must be seen to be appreciated. At Chelan there is no very good camping place for a large party, but the city council gave the Mountaineers the privilege of camping in the city park, providing us with wood for our stove and electric lights for illumination. The problem of privacy for the women of the party was solved by stretching tent-flies from tree to tree in the park in the form of a circle, forming a wall behind which the women camped.

On Saturday we hiked four miles to Chelan Falls, where we boarded the Great Northern train to Seattle, arriving at 8 p. m.

Does the trip end when we reach home and get back to our regular duties? It does not, for who can forget the thrill of the mountains, the true friendships formed, the joy of the camp-fires, the comradeship of the trail, camp and climb? We live it all over again unto

The End.

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The Memorial Seat *at* Sluiskin Falls

By Edmond S. Meany

The forty-eighth anniversary of the first ascent of Mt. Rainier by General Hazard Stevens and P. B. Van Trump was celebrated on August 17, 1918. At that time General Stevens identified the site of the camp from which the climbers started, while Sluiskin, the Indian guide, waited for their return. The historic spot was promptly marked by a cairn of rocks. It was deemed fortunate that the place was thus located, for in less than two months thereafter General Stevens had died.

The Mountaineers determined to build upon this camp-site a permanent monument. As the ridge had been named in honor of the Mazamas, of Oregon, that organization was invited to participate.

A member of the Mountaineers, A. H. Albertson, architect, designed a large memorial seat to be constructed of native rocks. The plan was regularly approved by the authorities of the National Park Service and permission was obtained to build the monument.

After a number of delays, the Mountaineers voted to place the matter in the hands of their president, Edmond S. Meany. He secured the volunteered assistance of James A. Wehn, sculptor, who, in turn, obtained the cooperation of Edmund C. Messett, president and manager

of the Sunset Monument Co. These three were joined by Martin Adams and Walter McLane, experienced workers in stone, and the five succeeded in constructing the monument in time for the dedication, which had been announced to take place at 2 p. m. on Thursday, September 22, 1921.

At the hour specified, Professor Meany performed the rites of dedication with an address as follows:

"When Isaac Ingalls Stevens was appointed by President Pierce to be the first Governor of the new Territory of Washington, he asked that he should be given the additional tasks of surveying the northern route for a proposed railroad from the Mississippi River to Puget Sound, and of serving as Superintendent of Indian Affairs in Washington Territory. Both requests were granted and when he began to make treaties with the Indians he was accompanied by his son, Hazard Stevens, then thirteen years of age. The son's boyish signature, as a witness, is attached to one of the ten treaties, and he was present at the making of several others.

"After the Indian wars of 1855 and 1856 Governor Stevens was promoted by the votes of the people to be delegate to Congress. He served two terms and then offered his services as a Union officer in the Civil War. His son Hazard Stevens became an officer on his staff. At the Battle of Chantilly, September 1, 1862, General Stevens personally led the charge which prevented a Confederate attack upon General Pope's defeated and retreating army. General Stevens was killed in that battle and his son was severely wounded. The boy recovered and continued his service throughout the war, being mustered out as the youngest brigadier-general of volunteers in the United States army.

"From that time on General Hazard Stevens devoted himself to the care of his mother and sisters, his widowed mother surviving to the age of ninety years. Most of the time the family lived in Boston, but for a number of years they lived in Washington Territory. It was during that time that General Hazard Stevens determined to ascend Mt. Rainier. He was joined by P. B. Van Trump. They persuaded the pioneer James Longmire to go part way with them and to secure for them the services of the Indian Sluiskin, as guide. Another member of the party was Edward T. Coleman, an English alpinist, who had made the first ascent of Mt. Baker in 1868. However, Mr. Coleman turned back at the Tatoosh Range, and the three—General Stevens, Mr. Van Trump and Sluiskin—continued to the shoulders of the mountain.

"Camp was made here, on what is now called Mazama Ridge, where the doubtful and lamenting Indian waited. The two climbers were overtaken by a storm near the summit and found shelter for the night in the steam caves. The next day, August 18, 1870, they visited the craters and actual summit before starting the descent. Sluiskin had given them up as dead and could scarcely believe they were not ghosts when the two returned to camp. On account of his watchful waiting the climbers gave the Indian's name to this beautiful waterfall.

"A few years later Sluiskin died. Mr. Van Trump lived on and retained his great love of the mountain. He worked during the summers in Indian Henry's Hunting Ground, and more than one climber found the old man waiting in camp late at night with a welcome supply of hot soup and other food. When he felt the end approaching he went home to his people in New York State. In a short time his sister wrote that on December 27, 1916, he just 'fell asleep like a child tired out from play.'

"General Stevens alone survived when the Rainier National Park Co. invited a celebration of the first ascent on its forty-eighth anniversary, August 17, 1918. General Stevens attended and told the wonderful story of the first ascent. He had with him the original alpenstock he had carried and the flag made for the occasion by the ladies of Olympia.

"Early the next morning General Stevens came out to visit the glacier which friends had named in his honor. On returning he paused here and picked out the exact spot of the camp where the Indian had waited for the climbers. Some young tourists passing were persuaded to help pile a cairn of rocks to mark the place. Later the Mountaineers and the Mazamas added a great collection of rocks from which to build a permanent memorial.

"General Stevens died on October 11, 1918, less than two months from the day he stood here. It was a sorrowful service to stand by his casket and participate in the funeral; but memory is grateful that friendship had prompted the writing of an ode of appreciation while he was still living. It was a pleasure to read the poem in his presence at the aniversary celebration in 1918. The same lines may serve our purpose now:

GENERAL HAZARD STEVENS

I

Our country's annals hold thee high
For deeds thy manhood wrought for her
Such times as strife made wide fields red

And courage faced mad bullets' whirr
Or clash of swords where captains led.
Chantilly's orchard saw thee bleed
The day thy famous father fell.
He fell, but filled the moment's need
With sword and flag,—his requiem knell,
The clarion bugle's forward cry.

II

Or turn the page and backward look
To days when thou, a half-grown lad,
Of serious mind, thy father's friend,
Didst go to meet wild Indian tribes.
Ah, who can know the hidden bribes
Of Fame to lock great deeds in sullen book
Of Time: the plighted faith to Indian clad
With power each tribe on written word of State.
But O, once more did savage warfare rend
The frontier homes and treaties; forced to wait
Long years, the wounds were slow to mend.
Behold, thy boyhood's memory store,
Though robbed of fame, is rich forevermore!

III

Of all thy deeds, the one we sing today
Our children's children long will love:
The mountain monarch's glistening crest
Gave call across familiar plain
And, hearing, thou didst seek the way
Through forest depths to gleaming snows above
The buttressed rocks where glaciers drain
The freight of clouds back to the sea
The way, the peak, and age-old mystery
Their challenge threw for thy new quest.

IV

Van Trump, courageous by thy side,
And Sluiskin, erstwhile Indian guide,
Climbed high to snow-sea's icy shore
And paused; the river's leap and roar
Gave voice to dreaded demon fears.
The standing Indian prays while climbers plod.
You climb and plod, your nervous strength is spent,
Your cave at night, so near the white man's God,
Rude shelter gives; then O, the morning's swift ascent!
The first ascent! Who now would spurn the tears
Of joy, or spare the gratitude of years!

"In the gratitude of the years we come.

"We have built this monument to the memory of those who, from this place, made the first ascent of this great mountain and led the

way for others who love the beauty and the glory of the high places of earth.

"I now dedicate this memorial to the service of those who may come this way. These ceremonies will soon be forgotten, but this monument will endure. Always when members of the Mountaineers and the Mazamas come to this place they will pause and from their hearts breathe new dedications.

"Mr. Peters, I stand here in a representative capacity—as the president of the Mountaineers and as a friend of the Mazamas. In behalf of those organizations I wish to present to you, and through you to the Government of the United States, this memorial seat."

Mr. W. H. Peters, superintendent of the Mt. Rainier National Park, replied as follows:

"It is a pleasure to represent the Government in receiving from the Mountaineers and the Mazamas this evidence of their love of, and interest in, the history and beauty of this Mt. Rainier National Park. Other parks, such as the Yellowstone, Yosemite and Grand Canyon, have been similarly benefited when patriotic and discriminating people have given buildings, monuments and other memorials.

"This is the first such gift to the Mt. Rainier National Park and I feel sure that, by this gift, the clubs here represented have furnished an inspiration for others to thus enhance the value of this beautiful playground of the people.

"On behalf of the National Park Service I accept this memorial seat and give assurance that we will take good care of it.

"Please inform the Mountaineers and the Mazamas that their beautiful gift is highly appreciated."

Therefore am I still
A lover of the meadows and the woods,
And mountains; and of all that we behold
From this green earth; of all the mighty world
Of eye and ear, both what they half create,
And what perceive; well pleased to recognise
In nature and the language of the sense,
The anchor of my purest thoughts, the nurse,
The guide, the guardian of my heart, and soul
Of all my moral being.

—*Wordsworth.*

In Memoriam

WINTHROP ELLSWORTH STONE

By RICHARD W. MONTAGUE

Dr. Winthrop E. Stone, who met a tragic death on Mt. Eon in the Canadian Rockies on July 17 of the present year, had been for more than a decade an honored member of the Mazamas. Born at Chester, New Hampshire, June 12, 1862, he graduated from Massachusetts Agricultural College in 1882, and after some preliminary work went to Germany for further studies in 1886, receiving the degree of Ph. D. (in chemistry) at Goettingen in 1888. In 1889 he was called to the chair of chemistry at Purdue University, Lafayette, Indiana, of which institution he became vice-president in 1892, and president in 1900, which latter office he held until his death, achieving in the meanwhile a distinguished success in that difficult position and bringing Purdue up to the very front rank of the colleges of its class.

His first outing with the Mazamas was at Mt. Baker in 1909, and he was with us again at Glacier Peak in 1911, on the north side of Mt. Rainier in 1914, and at Mt. Jefferson in 1917. Mrs. Stone accompanied him on both of the two latter occasions.

Always a notable figure, it is not easy to characterize truly the impression he created. One of the most unostentatious of men, assuming neither position nor privilege, there was yet something about him that commanded immediate respect, and it is hardly possible to conceive that anyone would ever have had the hardihood to attempt undue familiarity or to impose upon him. Perhaps it might be said that his most marked characteristic was a certain steady firmness of bearing which bespoke strong will and sure purpose. He was of sturdy and compact physique, with plain but regular and well-modeled features, wearing an habitual expression of a kind of grave serenity, as of one deeply conscious of the burdens to be borne and the steeps to climb, but conscious also of courage and strength to cope with the tasks before him. Reticent and sparing of speech, he was seldom wanting in the word fitly spoken; undemonstrative to a fault, a winning personality somehow shone through the reserve of his manner. He seemed to have no favorites, and yet the friends he had were "grappled to his soul with hooks of steel." He dealt not at all in the arts or words of endearment, but the beautiful and perfect sympathy and comradeship between him and Mrs. Stone were unmistakable. These seeming

contradictions were fused into a harmonious and rounded whole by some underlying quality of the man; perhaps because he was

> "Just that quiet kind
> Whose natures never vary,
> Like streams that keep a summer mind
> Snow-hid in January."

Rather perhaps the secret was a basic and compelling love of equal justice, informed by an even more basic sense of humor. (After all, is not the sense of humor merely a sense of right proportion, which is but another name for justness, made warm and kind by affectionate tolerance for others?) At the risk of being trivial, I may refer to an incident which always seemed to me to have something about it which made it thoroughly typical of him. One year, the annual frolic in camp took the form of a match game of baseball. The teams were chosen for their dramatic rather than their athletic abilities, and for for most part were about the "last word" of incompetence as ball-players. The competitive spirit had run pretty high, and Dr. Stone was selected as umpire, no doubt with the feeling that he was the man to keep it within bounds. One of the few real players, coming to bat at a critical moment, took advantage of his prowess to knock the ball something less than a mile over the heads of the outfielders. The umpire instantly and peremptorily declared him "out" and ordered the game to proceed, with an imperturbable grimness of countenance against which the rising riot broke as harmlessly as waves against a granite cliff. Thereafter, there was no "showing-off," and the game continued on its proper basis of equal and whole-hearted comedy. Trifling as the thing was, it somehow stands out in my memory as a deed of extraordinary fitness; and no one who saw it can repress a smile whenever he thinks of the wrath of the raging fans, tinged with awe at the monstrousness of the sacrilege and of the man who could "get away with it."

It is sometimes said that a man who shows what his calling is when he is not working at it proves that he is limited to it and lacks the stuff of which great men are made. Dr. Stone had nothing to lose by that test. He was an eminent chemist, who had made important original research in the field of organic chemistry, but I never heard him say a word on that subject in camp, except to answer direct questions that were put to him, which he would do briefly, lucidly and un-technically, but with a certain dryness that seemed to indicate their irrelevancy. He was a great administrator and executive, who loved his work and gave to it the best powers of his life and mind; but no one could have conjectured from his walk and conversation among us

that he was a college president, successfully carrying on a kind of work which is second in importance to none in our common life. His own powers and achievements seemed to have no place in his consciousness, except as they applied to the "instant need of things." The nearest I ever knew him to come to betraying a justifiable satisfaction in his own performance was when a course he had laid out over difficult and untraversed country found its destination as accurately as if it had been surveyed in advance.

A most capable mountaineer he certainly was,—bold, hardy, sagacious, deeply versed in the lore of snowfield, glacier and rock, and with a passionate love of the mountains that drew him irresistibly to them. Of late years he had been especially fond of the Canadian Rockies, and had spent many summers in exploring their fastnesses in company with Mrs. Stone. On July 15 of this year they left a base camp at Assiniboine on a trip of exploration to Mt. Eon, about five miles away, and hitherto unclimbed. They found a practicable route to the summit, and had almost completed the climb, when Dr. Stone detached himself from the rope which they had been wearing, in order to test alone the last lead, which lay up a little rock chimney. He called from above to Mrs. Stone, cautioning her on the care it would be necessary to exercise by reason of the change from the firm and solid rock they had been climbing over all day to a friable and disintegrated material. She asked if he was near the top, and he replied, "I see nothing higher." And then, without warning, the cragsman's unavoidable peril overtook him; the rock broke away beneath him, and he fell almost a thousand feet to his death. Mrs. Stone, dazed, stunned, almost bereft of her senses, climbed down the mountain as far as she could, and ultimately, reaching a shelf whence she could neither climb up nor down, remained there helpless seven days, kept alive by a little trickle of water which seeped from a crevice in the rock. Rescue was delayed by a report that the Stones had gone out by another way. When it was learned that they had not, a party, headed by a great Swiss guide named Rudolph Aemmer, set out at once, found her and carried her to the base of the mountain, where a physician had come to care for her; providentially, since otherwise she could not have survived the collapse that followed her dreadful trial. Another party, made up of guides and others, old friends and comrades of Dr. Stone, was organized as soon as possible, and after some days of difficult reconnoitering in stormy weather, found the body. Before taking it out, they climbed to the summit, built there the cairn shown facing page 58, and placed therein, in a metal box, a paper bearing this inscription:

Friday, August 5, 1921.

This monument was built by the undersigned in tribute to their comrade of the mountains, Dr. Winthrop E. Stone, President of Purdue University, Lafayette, Indiana, U. S. A., who on July 16, 1921,* with his wife, virtually completed the first ascent, reaching a point not more than fifty feet from this point. Dr. Stone's ice axe crowned this monument.

(Signed) Albert H. McCarthy, A. C. C., Lennox H. Lindsay, Edward Feuz, Conrad Cain, Rudolph Aemmer.

They then descended with the body, having to spend the night on a bare ledge at an elevation of 8,000 feet, and suffering severely from the cold. The next day they brought the body nearly to camp, whence it was taken to Banff, and thence to Lafayette, where funeral services were held on August 13.

We who knew Dr. Stone and treasured his friendship through long separations find it difficult to realize that he has gone; and we should hardly be surprised if he were to walk in on us at any hour with the old warm, quiet greeting. Cherished memories, as real and living as the scenes now passing before our bodily eyes, throng upon our minds as we think of him; the file of men toiling over the trackless mountain, laden with their glorious spoil of trout from the waters of the South Nooksack, his burden not the least; the humorous downward glance toward the recumbent figures of his drowsier campmates as he passed silently on the way to his morning plunge in the chill waters of the lake; the snug shelter, devised by the canny genius of John Lee, where we three slept warm and happy while icy mists swept the flanks of Mt. Rainier without; and a hundred more, not less vivid, not less dear. We lived with him through days all too few in the best gift of the gods to men—manly friendship; and he will live with us always in these priceless memories and in the hope that will not be denied.

O comrade of the firm will and the great heart who has

"gone before
To that unknown and silent shore,
Shall we not meet as heretofore
Some summer morning?"

*It was later learned that the true date was July 17.

From "The Purdue Alumnus"

Upper—Monument on the summit of Mt. Eon in memory of Dr. Stone, erected by the searching party. Lower—View of Mt. Eon. Dr. Stone's body was found at the spot marked with a "T."

Diamond Lake and Mt. Bailey *Photograph by Jacques Letz*

The Legends *of* Nehalem

By MARY E. POWELL

One of Oregon's most romantic beaches from a legendary standpoint, and beautifully varied in aspect, is the district around Neah-kah-nie Mountain. The frowning form of this old sentinel overlooks the Pacific Ocean on the west, the long sandy peninsula on the south, and three miles of the Nehalem River and Nehalem Bay on the east, with forested mountains on the east and north.

In and about this pleasant region the Nehalem band of Indians made their home. Just north were the Clatsop Indians, and to the south lived the Tillamooks, on the shores of the bay which is now known as Tillamook Bay.

There is a romantic atmosphere about the beaches of Nehalem that makes any story seem possible, and a sort of mythology has developed connecting the unrecorded past with the present. The most fascinating of all these legends reads like a fairy tale.

An Indian by the name of Nehala lived with his wife and only daughter on the lower southern slope of old Neah-kah-nie. Wena, the mother, was very indulgent toward her lovely daughter Ona, a girl of romantic disposition and vivid imagination, who found the mountain and the ever-changing shore a constant source of wonder.

One stormy night there was no sleep for Ona, for the sea raged and the wind shrieked. At the first glimpse of dawn she accompanied her mother to the beach to behold the ravages of the storm. The sand was literally strewn with strange wreckage. They were the first comers and as they picked their way among the debris Wena saw a human form. Nearer they crept, only to find a lifeless victim of the storm. Passing on they came to another dead body.

By this time other Indians were about, and one disreputable member of the tribe discovered the body of a third victim of the wreck. As he did so Ona saw signs that indicated life in this form, and saw also that he was unlike any man she had seen before. His face was white and his clustering curls and beard were red,—something new to the people of Nehalem. He seemed a model of beauty to the wondering girl. The Indian who had found him picked up a piece of wood to beat out the remaining life, but quick as a flash Ona wrenched the weapon from his hand and struck him senseless with it. Others were left to care for him while Ona and her mother bore the white-faced sailor to their home, where Nehala gave him treatment which restored him to consciousness.

In a few days this young man recovered sufficiently to accompany his rescuers to the beach, where he found a chest partly buried in the sand. Aid was given him in excavating it, and it was found to contain a veritable arsenal of guns, swords, and other weapons. He continued to live with the family of Nehala, and though he spent his life with the Indians he left no authentic name nor sign of nationality. From what is told of him, however, it would seem that he was of Scotch origin. He soon won the love of both women by his gentle ways and the consideration for the weaker sex,—a trait new to them. His bravery was by no means lacking and he was not long in gaining the respect and love of the father.

Ona's beautiful character was known by other tribes, and young Tillamook, son of the chief of their southern neighbors, was desirous of winning her for his own, and naturally became very jealous of this red-headed white man, for whom it was quite evident she had the highest esteem. Gossip developed and grew to such a pitch that the Indians of Nehala's tribe deserted him and joined the forces of Tillamook.

Nehala decided to move farther north and Sandy, the white man, consented to go with them only on condition that Ona should become his wife. This made her very happy, for her every wish and desire was for him. As expected, Tillamook in his rage followed them, and while dogging their steps was shot by Sandy. This tragedy called for a council of war and Clatsop, chief of the northern tribe, asked Nehala and his family to join his people. Sandy and Clatsop became life-long friends, and the sincere manhood of Sandy won the respect of all the tribe.

Ona became the mother of four children—three daughters and a son—and they lived happily on the beautiful Clatsop plains until smallpox broke out among the Indians. Clatsop was stricken with the disease and Sandy, true to one who had befriended him, determined to go to the bedside of his friend. He charged Ona to go to the mountains with the children for safety, and if he survived he promised to come to her. The story ends with the death of both friends as victims of the plague, but its lesson of human faith and trust were handed down from generation to generation.

Lewis and Clark in their journal tell of seeing the summer home of Nehala in 1806 and of meeting an Indian who must have been Sandy's grandson, with features showing Caucasian descent,—face pale and freckled, and hair and beard reddish in color.

John Minto in 1846 met an Indian one of whose ancestors was a white man who was saved from a wreck in prehistoric times. He

said in reply to inquiry about the red-headed Indian seen by Lewis and Clark, "Okook nica papa" (That was my father).

Other tales deal with shipwreck and piracy, and hint at treasures from the Spanish Main. The wreck which has caused the most discussion was that of a ship containing beeswax. The first historical reference to the wax was in 1814, when it was reported that the Indians used to bring it to Astoria for trade. It was a fairly common object of barter for several years and in 1847 twelve tons of it were taken to Honolulu. No one questioned its being beeswax from a wrecked ship until 1893, the year of the World's Fair in Chicago, when an Austrian scientist, after a very superficial examination, pronounced it a mineral wax which is found near oil fields. From that time until 1895, when Mr. S. J. Diller was sent to investigate the coast and determine its character, discussion was heated as to whether it was mineral wax or beeswax, but Mr. Diller determined by careful analysis and investigation that it was beeswax and that it was distributed only along the coast on what had formerly been tideland. So ended the hope which many had cherished,—of discovering rich oil lands in that region.

Indian tales vary in describing the wreck. One of the best known versions relates that some Indians were hunting on the slopes of Neah-kah-nie when they noticed three strange craft in deadly combat. As the vessels gradually drifted in with the flowing tide, the watchers could see smoke being blown from one to the other. "Poof, poof," is the way they described it. The battle continued for some time and finally two of the ships sank. The other, badly damaged, was forced to make a landing on the beach for repairs. When this work was finally completed, an attempt was made to run through the breakers, which was fatal. The vessel was wrecked and the beach was strewn with its contents. The beeswax, however, was supposed to be the cargo of one of the vessels sunk during the battle.

Here is another version. One morning as the natives were hunting beside the mountain they were surprised to see upon the beach large quantities of a strange substance. Exploring further they found the wreck of a monstrous, queer canoe having sails which were torn and flapping in the wind, and objects new to them were strewn along the beach. Stranger still were the men, thirty in number, who clung to the wreck; for their faces were white, their clothes strange, and their language new and very bewildering to the natives. The Indians finally learned by sign-language that these men had come from across the ocean and during the storm of the previous night their vessel had been wrecked. By tracing back the four generations who have told and retold the story, the possible date of this wreck is thought to have

been about 1679. Markings on the beeswax seem to indicate that this assumption is correct.

Before the complete destruction of the vessel, the men were said to have taken a heavy "box" from the boat and to have carried it far up the mountain slope and buried it. This must have been the far-famed treasure chest for which men from all over the United States have come to dig. The sailors understood the savage's superstitious fear of death, so they protected the treasure by killing a negro who was one of their party and burying his body on the chest.

There are many conflicting stories of what became of the crew, but all seem to agree that thirty was the correct number. Some claim that all the men were lost while trying to save the vessel. Others say that four of them took a trail northwards and possibly made their way to the vicinity of the Columbia River, where they might have been picked up by a vessel landing there. However, nothing was heard of them. The remaining twenty-six cast their lot with the natives of this beautiful country, built cottages, and lived on friendly terms for some time. Later, ill feeling arose which resulted in a battle in which all the white men were killed.

Whether any of the crew ever visited the burial place of the treasure, or whether it was ever visited by others, is a blank as far as history is concerned. There are many tales of piracy, of Oriental treasure, of treasure stolen from the churches of Mexico and South America; but according to the most authentic Indian stories only one chest was ever buried on the mountain.

Here are some of the actual facts. Not far from the shore and near the tavern of Mr. S. G. Reed, owner of part of the lower southern slope of the mountain, is a rock on which strange markings may be found. This is regarded as the first clue to the hidden treasure. The rock weighs about two hundred pounds and never would have been put there as a practical joke. On its flat surface is a W with a cross on either side, the letters DE followed by eight dots, and below an arrow pointing to the slope of the mountain. A short distance away, a smaller rock has on it an arrow with two dots, and this arrow points to the larger rock. Farther up the mountain other rock markings have been found, all thought to be associated.

The Indian legends and these present apparent evidences have incited many venturesome persons to search for the treasure. Some determined individuals even dug down into the mountain a distance of thirty feet; but who could picture a pirate crew exerting themselves to bury even a treasure chest so deep? Others have heard hollow sounds after being sure that they had the location, only to find that

some industrious animal had tunneled deeply under a rock surface, and they were doomed to disappointment. Old Neah-kah-nie has been fairly gophered with holes of various depths dug by human diggers, but no one has yet been successful in solving the mystery.

(The assistance of Mr. George H. Himes, of the Oregon Historical Society, in the preparation of this paper, is gratefully acknowledged.)

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Trips *to* Saddle Mountain *and* Neah-kah-nie Mountain

By Colista M. Dowling

Anticipation ran high as we boarded the seaward-bound train on that promising evening of August 20, 1921. We were going to meet kindred lovers of the world's lofty places. Arriving at Astoria something after ten o'clock, we were met by a sole representative, Mr. John Berry, of the Astorian Angoras. He graciously escorted us to a familiar restaurant and bade us feast as the guests of his club; then directed us to indoor sleeping quarters, much to our surprise.

At six the next morning we met a flock of about seventy-five Angoras on the wharf, where they had prepared great kettles of steaming coffee with fresh cream and sandwiches. This club, by the way, is but an infant organization, having begun its career only last July.

A caravan of autos carried us about six miles over the new bridge and paved highway to the terminal of the Saddle Mountain Logging Co.'s railroad. The train of flat-cars bore us gaily over eighteen miles to the heart of their operations and almost to the base of a really formidable-looking mountain,—not high, but decidedly up and down. Its perpendicular walls were seamed with many deep clefts.

There are two ways of approach—the long new way and the short old way—so the party divided. The latter way proved to be the more interesting. Almost at first, we climbed a ladder under a stone shelf, coming out through an aperture in the rock. The rest of the trip was up one of those fissures that looked so perpendicular. Rocks and loose soil formed the pathway. Climbing this steep acclivity, in a seemingly short time we found ourselves comfortably situated in the seat of Saddle Mountain. Passing up over its grassy slope, we reached the higher horn, which looks so imposing from a distance.

There a marvelous panorama held us. The perfectly wooded, undulating hills and mountains reached the dim eastern and southern horizon. To the north the clouds played about the mountain peaks, Mt. Rainier being visible once, but to the west lay the ocean, its white surf beckoning us. The cottages at Gearhart were quite evident. Long stretches of the Columbia River were visible, and the point where it pours its mighty waters into the ocean. Another striking feature was the Lewis and Clark River, as it curved about in the flats to end finally in Young's Bay and so into the Columbia. Part of Astoria was seen, the road and bridge by which we had come, and little dotted farms and clearings, which taken together, made an utterly satisfying vision. All ours! No king had more joy in his kingdom than we in this wide-flung pageant of beauty! Dr. Johnson and Mr. Eugene H. Dowling, inspired by the view, made appropriate remarks on the preservation of nature's gifts. The Forest Service lookout served hot drinks.

After descending, train and auto carried us back to Astoria, where we watched the sun plunge straight into the gleaming waters of the Columbia.

We parted from our hosts feeling that new and worthy friendships had been formed, and filled with a sense of gratitude for their gracious generosity. We promised to meet them at Neah-kah-nie Mountain later.

Saturday, September 3, found us going over the Coast Range to Nehalem. That night we enjoyed the play of phosphorescent light as giant waves broke out of the vast gloom, line upon line, only to disappear at our feet. Sleep called us, but by three o'clock, it was raining so hard that it seemed as if the ocean had been lifted bodily and was pouring over us. A wailing voice broke the silence: "Mr. D., is there a dry spot in the whole world?" And Mr. D. gathered the ladies and their bedewed blankets into the shelter of an old shed.

A wondrous day of sparkling blue and gold broke upon us the next morning, and with it came the Angoras, who had motored down the coast. Together we tramped over the shoulder of Neah-kah-nie Mountain to "Short Sand Beach" for bathing and sports. On the way back to camp the mountain was ascended, and another splendid panorama greeted us. The Angoras' circus filled the evening, Mr. Mannix being ring-master; and we all voted it a jolly good show. The next day the Angoras served a fine lunch to all.

Sad farewells were exchanged in the grove, but at Nehalem we had a joyful encounter because of a mishap to an Astoria-bound automobile. We parted again at the wharf, one, Love, enlivening the

scene by jumping straight into the bay to recover a ball tossed by our Joy.

Midnight found us safely at home, our satisfaction complete.

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The Eighth Annual Mount Hood Outing

By NELL F. STOWELL

July 16 and 17 were the dates chosen for the annual Mt. Hood outing of 1921. The trip was under the auspices of the Local Walks Committee. About one hundred and sixty persons registered, and early on Saturday afternoon, July 16, they were marshalled into cars and whisked rapidly away towards Government Camp. The weather was perfect, and soon Mt. Hood came into view. Those who had never climbed before (and there were many such), looking at the towering majesty of the mountain, whispered among themselves, "Do you think we'll make it?" And old Hood challenged back, "Just come on up and try!" A stop was made at Aschoff's Mountain Hotel, beloved of all Mazamas and their friends, where refreshments were served to the dusty travelers.

Arrived at Government Camp, there was much scrubbing, brushing and chattering preparatory to dinner. After dinner the party strung out on the trail to the timber-line. Each party, upon arrival, picked out a warm spot in the snow and bivouacked for the night. The moon came up and silvered the pinnacles of snow-capped mountains. Murmurous voices reached your ears sleepily. Someone stumbled against you. . . . .

"Everybody u-u-u-u-p!" And you awoke to a cold, gray world, with the moon hanging low in the west. Then followed a hastily eaten breakfast of fruit, sandwiches and hot coffee, with the crowd gathered around the central fire—ghostly figures in the darkness, the firelight touching the tips of alpenstocks and casting weird shadows upon the snow.

"Three o'clock! All here? Got everything—alpenstock, glasses, grease-paint? Let's go!" And we were off across the snowfields, led by Mr. Roy W. Ayer. Quickly the climbers swung up the mountain. Snow and weather conditions, said the "old-timers," were ideal. The

sun came out and painted in glowing colors the mountains to the south—Jefferson, Three-fingered Jack, the Three Sisters, Broken Top, and, still farther away, a mere speck in the distance, Diamond Peak. And before us was Hood, wonderful beyond compare, each crag and pinnacle touched with gold, rose, azure and mauve.

At a convenient rock slide, a halt was called and grease-paint magically appeared. Then began such "making-up" as would put the Baker Theatre to shame! Each individuality found expression. The most practical minded favored brown or black; the aesthetic, delicate shades of pink and blue, while the cosmopolitan used a little of each color.

Again we were off, more slowly now; one step—two steps—three—four—five! Will the whistle never blow? At last, down the line went the cheery word, "We're nearly to Crater Rock, where we stop for lunch. Come on! Your pep!"

Crater Rock was gained, and here we rested. An airplane circled over us, taking pictures, and those of the party who had cameras returned the compliment.

The last twelve hundred feet! We were on the ropes now, and going was easier. One more ridge—and another—and yet one more; and then, the summit! And we stood on "top o' the world" and revelled in the panorama spread below—undulating ridge upon ridge, crowned by snow-capped peaks.

By two o'clock p. m. all were on top. Of the one hundred and sixty-five who started, only a half-dozen failed to reach the summit. To Mr. E. H. Dowling goes much credit for bringing up the stragglers; a word of encouragement here, a "let-me-help-you-sister" there, and many who would otherwise have turned back, pluckily stayed with it and made the top.

Hot tea was served (heavenly tea!), and the descent began. Some took their glissade standing; others preferred sitting. Either way was glorious!

Another hearty dinner at the Government Camp Hotel, and we were bundled into machines and started homeward. And again the moon rode high in the heavens and touched the lofty top of Hood, as happily we fingered the silken ribbons that read, "Summit Mt. Hood, 1921."

Address *of the* Retiring President

A. Boyd Williams

(Delivered at the Annual Meeting held in the club-rooms, October 3, 1921.)

A summary of the activities of the Mazamas for the past fiscal year shows that we can be justly proud of our progress in living up to the traditions of our organization. In addition to our mountaineering achievements we have accomplished more than ever before in our literary work, and in service to the general public we have not fallen short in any particular.

The annual outing this year proved to be one of the best in the records of our club, and was exceptionally interesting and unique in that we did not maintain a permanent camp for the full two weeks, on account of the extensive territory covered. This afforded an excellent opportunity to view some of Oregon's most famous beauty spots, Crater Lake in particular. I will not attempt to elaborate on the outing, as it will be fully covered by the able Publication Committee, appointed to supervise the publication of this issue of our magazine. Suffice it to say that the Outing Committee acquitted themselves in their usual efficient manner, sparing no effort in carrying out arduous tasks and in working out the many details involved in conducting an outing of this nature.

The Mt. Hood trip, under the auspices of the Local Walks Committee, was conducted in the usual successful manner and reflected no little credit on the individuals in charge. Of the 186 persons who started, 175 reached the summit, and as the majority of them were making their initial ascent, the club gained many new members. The annual Mt. Hood climb is undoubtedly of great value to us in securing such accessions, and should receive every encouragement. The members of the committee are to be commended for the time and effort which this branch of our work requires.

The present council regrets very much that it was unable to secure a suitable site and erect a lodge, for that was one thing on which we had set our hearts. A very good committee was appointed, with full power to act; but they were unable to obtain a lease of any tract of land suitable for our purpose. Now that there is the prospect of a loop road around Mt. Hood, the incoming council may be able to solve this problem; for I think it is the consensus of opinion of our members that we should have a lodge. A site near Mt. Hood may be practicable in the near future.

We have achievements to our credit this year which have received much favorable comment from the public at large and have enhanced our prestige in the eyes of all nature-lovers.

The Buck Rock and Punch Bowl trails, which were built by Mazama members and "local walkers" at no expense to the Government, are lasting monuments to the public spirit of our organization and our desire to aid in providing means for the pleasure of others.

The tree-planting day at Bonneville was no less commendable, and these tokens of our eagerness to assist nature in providing beautiful playgrounds for all to enjoy will be living and growing rewards for our time and labor expended.

In cooperation with the U. S. Forest Service we have placed a number of trail signs and placards, with inscriptions suggested by Mr. Dowling. These inscriptions have been very effective in educating the general public as to proper conduct and precautions at camp-sites and in the promotion of sanitation in our parks and forests. This good work should be continued and should receive the hearty support of all our members.

Our "Oregon Out of Doors," a treatise on Oregon's scenic and historic assets (the first of a series of books to be published by the Mazamas), has been recognized as a work of authority and has been adopted by some of our schools and other institutions as a reference book. Great credit has accrued to our club through this publication, as evidenced by a full column editorial in the Oregonian.

The 1920 issue of our official magazine is one of the best and most interesting publications we have ever produced, and reflects great credit upon Mr. Jamieson Parker, the editor, his assistants in the work and the contributors. Our annual magazine is received and read throughout the United States and in many foreign countries, and we should endeavor to maintain the present high standard of this branch of our work.

In the past the Mazamas have been criticized for their dancing parties, on the ground that such functions were undignified for an organization of this character. Therefore, in August, 1920, there was organized "The Owl Club," which welcomes all Mazamas and "local walkers" to its social activities.

A Scouting Committee was also an innovation of the past year. Its members have performed their duties very efficiently. In locating trails through new country they have been of great assistance to the Local Walks Committee. I trust the Scouting Committee will be continued in the future.

Crater Lake and Llao Rock

Photograph by Jacques Letz

Crater Lake, showing the Phantom Ship.

Photograph by Boychuk

I respectfully suggest that in order to carry out fully the objects provided for in Article 2 of the by-laws ("the collection of scientific knowledge and the dissemination of same"), we should not neglect such things as the recent slides on Mt. Hood and Mt. Adams. The public looks to us and expects to be informed by us on occurrences of this nature. It seems to me that we should consider it our duty to send out individuals who are qualified to investigate and report scientifically, or as fully as possible, on such phenomena.

During the past year we have been concerned at times in regard to our finances, as our expenses were heavier than in previous years. We find, however, that the annual outing and the Mt. Hood outing were so successful that the revenue from these two events, together with the receipts from the local walks and dues, have helped so materially that we now have in our treasury about $1,200.00 more than we had last year at this time; and we have quite a number of copies of the "Oregon Out of Doors" yet to be sold. To be able to report so satisfactorily in regard to our finances is very gratifying to the present council.

The Mazamas are rendering a great service to the public, and that service is undoubtedly appreciated. We are as well known, perhaps, as any mountaineering club in the world, and among the residents of Portland it is a confession of ignorance for one to say that he does not know who the Mazamas are.

In closing, I wish to thank the present council and the several committees for their loyal support during the past year. It has been a great pleasure to me to work with them. I consider it a high honor to have had the privilege of being the president of this club, and in the future its activities will always be of interest to me; and any service that I can render will be cheerfully given.

Night is a dead monotonous period under a roof; but in the open world it passes lightly, with its stars and dews and perfumes, and the hours are marked by changes in the face of Nature. What seems a kind of temporal death to people choked between walls and curtains, is only a light and living slumber to the man who sleeps a-field.

—*Robert Louis Stevenson.*

Report of the Certified Public Accountant Who Examined the Financial Affairs of the Mazamas

INCOME AND PROFIT & LOSS ACCOUNT

For the Period from October 8, 1920, to October 3, 1921

INCOME:			
Members' Dues		$1,895.00	
Life Memberships		50.00	$1,945.00
Miscellaneous:			
Interest on Liberty Bonds		29.00	
Interest on Savings Deposit		90.90	
Key Sales		9.25	
Sundry		2.50	131.65
			$2,076.65
Less Net Loss from Committee Transactions:			
Losses:			
Mazama Magazine		819.74	
Oregon Out of Doors Magazine		448.16	
		$1,267.90	
Profits:			
Annual Outing—Crater Lake	$556.75		
Mt. Hood Outing	535.92		
Local Walks	18.45	1,111.12	156.78
Gross Income			$1,919.87
EXPENSES:			
Club Room Rent		$ 552.00	
Telephone Service and Tolls		94.35	
Printing and Stationery—General		253.70	
Entertainment		21.68	
Lectures		11.35	
Associated Club Dues		15.00	
Insurance		23.70	
Furniture Repairing and Renovating		88.95	
Keys		19.60	
Claims Settled—1920 Outing		79.65	
Donations—Boy Scouts		25.00	
Donations—Improvement of Trails		52.90	
Sundry		22.42	1,260.30
Net Income			$ 659.57

BALANCE SHEET

As at October 3, 1921

Assets

Cash in Banks:		
General Fund	$2,551.16	
Savings Fund	3,045.00	$5,596.16
United States Liberty Bonds		700.00
Club Room Furniture and Camp Equipment		1,000.00
		$7,296.16

Liabilities and Net Worth

Liabilities	$ None
Surplus	7,296.16
	$7,296.16

CERTIFICATE OF AUDITOR

Portland, Oregon, November 15, 1921.

The Mazama Council,
Portland, Oregon.

In accordance with your instructions I have audited the accounts of the Mazamas for the fiscal year ended October 3, 1921, and now submit my report.

After meeting all current expenses the operations of the Mazamas for the period under review resulted in a net income of $659.57. Particulars are given in the accompanying Income and Profit & Loss Account. The Balance Sheet on this page represents the financial condition of the club as at October 3, 1921.

Certificates were received direct from the depositories in verification of the cash funds. The United States Liberty Bonds were inspected. The club room furniture and camp equipment is covered by fire insurance.

The accounts of the Treasurer and the various committees were examined and found to be in order.

Yours truly,

Robert F. Riseling,
Certified Public Accountant.

Report of the Local Walks Committee

Portland, Oregon, October 15, 1921.

To the Mazama Council:

The Local Walks Committee submits the following report covering its activities for the year 1920-1921:

Included in the weekly trips there were a number this year which proved to be of more than usual interest, namely:

The Lost Lake snow-shoe trip, conducted by Mr. John A. Lee, gave over forty participants a wonderful experience. Weather conditions contributed to the enjoyment of this trip, for a snow storm occurred, followed by a perfect day at the lake, which afforded a splendid view of the mountain.

The Wahtum Lake-Indian Mountain trip, under the leadership of Mr. H. S. Babb, was an endurance test for many, but the beauties of the lake in its winter garb and the views from Chinidere and Indian mountains amply rewarded the effort.

The Saddle Mountain trip was highly interesting and unusually pleasant, due to the splendid cooperation of the Angora Club of Astoria, who provided dinner, breakfast and lunch for the Mazamas, took them eight miles over paved roads to the terminus of Saddle Mountain Railroad, loaded them upon flat cars, and carried them eighteen miles by railroad to the point where the ascent of the mountain is begun.

The Angoras and the Mazamas enjoyed each others' company so much on the Saddle Mountain trip that another joint trip was then and there planned, and the two clubs met again at Neah-kah-nie Mountain on September 3, 4 and 5. This trip proved to be one of the most enjoyable the club has ever had, again due very largely to the splendid spirit shown by the Astorians.

The Paradise Park trip, scheduled for the Fourth of July, was expected to be the best of all, but was abandoned on account of unusual snow conditions.

The annual Mt. Hood outing was very satisfactory. There were about 200 persons registered for the trip, out of whom about 165 attempted the climb, and though there was an unusual amount of mountain sickness, we believe only eight persons failed to make the summit. In this connection the thanks of the club and everyone who participated should be extended to Miss Crissie C. Young of this committee, whose untiring efforts had much to do with the success of the trip. We also want to express our gratitude to the U. S. Forest Service, and in particular to Mr. C. J. Buck, for their efforts to place the climbing-ropes on the mountain in time for the ascent; and to Messrs. Blakney, LaMade, Maas, Milleson, Widmer and Burglund, all Mazamas, and others, who assisted in placing the ropes. We want to thank Mrs. H. E. Milleson, Miss Winifred Smith and Mrs. Colista M. Dowling for their work in providing hot tea for the entire party on the summit of the mountain. We are also obliged to the Forest Service, and particularly Mr. C. J. Buck, for securing the services of Major Jacobson, and to Major Jacobson for the splendid entertainment he furnished the party by his airplane flight over us as we climbed.

Through the efforts of this committee the Meier & Frank Co. displayed a "Fire Prevention Window" in the name of the Mazamas during "Fire Prevention Week."

With the aid of several other interested members this committee built and entered a Mazama float in the Rose Festival parade at a cost to the club of twenty dollars, which float received third prize.

This committee gave its best efforts in cooperating with the Trails Committee toward the success of the tree-planting and trail-building trips.

By securing advertisements for the schedules, this committee has furnished the last two issues, of 1500 copies each, without cost to the club.

We wish to express our gratitude to the leaders of the various trips, for we feel that they have materially aided the efforts of this committee.

Following is a list of the trips taken during the year and a financial report.

Date of Trip	*Trip*	*Leader*	*No. Present*
1920			
Oct. 9-10	Eagle Creek-Estacada	D. V. Stroop, D. F. Mattson.	15
Oct. 16-17	Aschoff's Mountain Hotel	Entertainment Committee	94
Oct. 23-24	Trail Day, Eagle Creek	Trails Committee	115
Oct. 30-31	Archer Creek	Alfred F. Parker	50
Nov. 6	Beaver Creek-Estacada	Martha M. Gasch	120
Nov. 14	Rooster Rock-Bull Run	A. E. Smith, B. C. Nelson.	30
Nov. 20-21	Larch Mountain	Jamieson Parker, A. D. Platt.	50
Nov. 24	Moonlight Walk	Martha Landis	20
Nov. 28	Holbrook-Hillsboro	J. T. Teesdale	60
Dec. 5	Beaver Creek-Oregon City	Clyde E. Carlos	60
Dec. 12	Beaver Dams	Sadie McLaughlin	70
Dec. 19	Mistletoe Trip, Dundee	H. E. Milleson	60
Dec. 26	Pearcy Island Lighthouse	Cecil M. Pendleton	70
1921			
Jan. 1-2	Aschoff's Mountain Hotel	Entertainment Committee	66
Jan. 9	Riverside-Elk Rock	Hazel A. Raymond, Dorothy Osborne	105
Jan. 16	Mt. Sylvania-Oswego	Bert Whitney	60
Jan. 23	Angel's Rest-Devil's Rest	C. E. Blakney	120
Jan. 27	Moonlight Walk	Florence Ingham, Lucy Woelfer	30
Jan. 30	Milwaukie-Oak Grove	Edwin Widmer	90
Feb. 6	Park Place-Clackamas River	H. I. Corning	40
Feb. 13	Oswego-Oregon City	Henrietta McKaughan	27
Feb. 20	Capitol Hill-Council Crest	M. W. Gorman	8
Feb. 19-22	Lost Lake	John A. Lee	47
Feb. 22	Moonlight Walk	Nell C. Wold	20
Feb. 27	Skyline Trail-Meridian Monument-Blasted Butte	Mr. and Mrs. C. W. Hayhurst	61
Mar. 6	Paper Chase	Harriett Monroe	118
Mar. 13	Ford Street Bridge-Arlington Heights	Cora M. Howes	21
Mar. 19-20	Larch Mountain	Local Walks Committee	68
Mar. 23	Moonlight Walk	W. P. Forman	30
Mar. 27	Columbia Bottoms	J. T. Teesdale	80
April 3	Mayberry-Sandy River	Martha Landis	105
April 10	Trail Day, Eagle Creek	Local Walks Committee	75
April 17	Sycamore-Anderson	Mr. and Mrs. Howard Hall.	91

Date of Trip 1921	*Trip*	*Leader*	*No. Present*
April 22-23	Aschoff's Mountain Hotel	Entertainment Committee	80
May 1	Gresham-Troutdale	Local Walks Committee	54
May 8	Johnson's Crossing-Scappoose	George Meredith	81
May 15	Shepperd's Dell-Bridal Veil	C. E. Warner	91
May 22	Vancouver-Livingston Hill	Eric Bjorklund	50
May 24	Moonlight Walk	Marguerite Colpitts	40
May 29	Heron Rookery	Cecil M. Pendleton	25
May 30	Sherwood-Chehalem Mt.	C. E. Warner	12
May 28-30	Wahtum Lake	Harold S. Babb	75
June 8	Weed Peony Farm	Colista M. Dowling	40
June 11-12	Cherry Grove	Louis W. Waldorf	33
June 19	Trail Day, Eagle Creek	Local Walks Committee	25
June 25	Carlton-Mt. Pisgah	Mr. and Mrs. W. W. Evans	13
July 3-4	Dowling's Farm		10
July 17	Molalla River	Edwin Widmer	35
Aug. 7	Pudding River	Local Walks Committee	20
Aug. 14	Troutdale	Clyde E. Carlos	20
Aug. 21	Saddle Mountain	Local Walks Committee	24
Aug. 28	Woodland-Kalama	Eric La Made	14
Sept. 3-4	Beach Trip	Local Walks Committee	75
Sept. 11	North Fork Clackamas River	Dorothy S. Brownell	22
Sept. 14	Moonlight Walk		27
Sept. 18	Latourell Creek-Buck Creek	Edwin Widmer	40
Sept. 25	Cottrell-Troutdale	C. E. Blakney	22
Oct. 2	Tanner Creek	Frances Jane	80

RECEIPTS

Local Walks Fees	$ 228.45	
Mt. Hood Outing	2,177.00	$2,405.45

DISBURSEMENTS

Mt. Hood Outing	$1,641.08	
Miscellaneous	105.10	1,746.18
Balance		$ 659.27

Respectfully submitted.

EUGENE H. DOWLING, *Chairman.*

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1921-22

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Book Reviews

Edited by B. A. THAXTER

"THE MOTOR CAMPING BOOK."

Do you know the joys of motor camping? Have you ever packed your dunnage into your flivver or your Pierce-Arrow and gone for a motor camping trip? Or have you been afraid to make the venture because you didn't know how to camp out while touring in a motor car? It matters not whether you are the veriest novice, or whether you have motored from Portland, Oregon, to Portland, Maine, and from the Canadian border to the Mexican line, camping out every night en route, this book will give you practical and interesting information on almost any subject even remotely connected with motor camping.

After a brief chapter on "Why We Motor Camp," and another on "The Importance of Right Equipment," the author discusses almost every possible bit of necessary equipment and much that some might deem as unnecessary impedimenta. The best types of camp stoves, cooking kits, food boxes, tents, beds, camp furnishings, etc., are discussed in detail. But after all, he says, "motor camping is an individual problem that must be solved by the individual." The book contains an invaluable chapter on "Getting Out of Trouble," one on "Where To Go Motor Camping," concluding with one entitled "The Law and the Motorist," a careful perusal of which will give one a working knowledge of what constitutes the law in various states through which one plans to pass. The volume is doubly attractive by the numerous splendid illustrations; there are 100 of them scattered through the book.

If you are an "old hand at the game" you will find here information that it has taken years of costly experience to acquire; if you are a novice, the book will start you right.

B. A. THAXTER.

ELON JESSUP. *The Motor Camping Book.* Putnam. 1921.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"HANDBOOK OF YOSEMITE NATIONAL PARK"

Here is a volume that is just what it pretends to be,—a handbook of Yosemite National Park. To one who contemplates a visit to the park the book is invaluable. Between its covers there is just the information one wants, whether he visits "The Valley Incomparable" as a tourist making a three or four days' stay there to catch a vision of its stupendous grandeur, or as a scientist spending the entire season in the park to study its geology or its flora. Instead of being the work of one writer it is rather a compilation of articles written for the most part by different scholars and scientists—each an authority on his own subject—and collected and edited by Ansel F. Hall of the National Park Service.

There are articles on the history of the Yosemite region, the Indians of Yosemite, how the park is administered and the ideals and policy of the National Park Service. Then follow articles on the park's geology, birds, mammals, reptiles, fishes, insects and flowers. A special article deals with the Giant Sequoia, and there are also articles on camping, mountaineering, motoring and photography in the park. The entire volume is profusely and beautifully illustrated with photographs of park scenes and each article has an appropriate drawing as a chapter heading. There is also a good map of the park and an appendix in which

the editor has collected much valuable information concerning weather conditions, fishing, etc.

This volume will satisfy the demand for information concerning Yosemite National Park that no other one volume can supply. It is a valuable addition to the bibliography of Yosemite. B. A. THAXTER.

ANSEL F. HALL. *Handbook of Yosemite National Park.* Putnam. 1921.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"CROSS-COUNTRY SKI-ING." To the devotees of winter sports—and their numbers are increasing year by year—Arnold Lunn's book on ski-ing will come with a great deal of interest. The author, for many seasons a follower of this famous Alpine sport, out of the richness of his own experience, has produced this little volume to serve as a handbook for beginners, with much of interest for runners of experience. After a brief introductory chapter, there follow chapters on "Equipment," "Uphill and Straight Running," "How to Ski," and "The Elements of Snowcraft." There are eight illustrations and numerous diagrams showing how all the ski-ing swings and turns are made.

The growing popularity of ski-ing as one of our out-of-door winter recreations makes it certain that this practical little volume will find a valued place in the library of many lovers of winter sports. B. A. THAXTER.

ARNOLD LUNN. *Cross-Country Ski-ing.* Dutton.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"THE BOOK OF A NATURALIST." W. H. Hudson, a versatile and widely traveled English naturalist, brings to us in this volume a collection of studies, essays, and sketches of animal life—some twenty-nine of them in all—entirely unconnected and yet each filling its necessary part in the book. It matters not whether he is writing of his observations in England or South America, whether his subject is bats, toads, adders, wasps, rats, moles, birds, dogs, pigs, horses, or flowers,—he is equally at home in his treatment of any of them. He seems to know all the secrets of nature. He has a wonderful intimacy with her simplest creatures. He takes the reader with him through a magic door into a world of rich color and fascination. Let him open the book anywhere and he will find a charming essay written in a delightful style that cannot but deepen his love and understanding of nature.

B. A. THAXTER.

W. H. HUDSON. *The Book of a Naturalist.* Doran.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"MOUNTAINEERING ART." This is a book which presents the art of mountaineering in an able and interesting manner. The author has spent many years as a leader of climbing parties in various parts of Europe, and tells of his experiences on rock and snow while acting as a mountain guide. A great deal can be learned about personal care and equipment—what clothing to wear, how to hobnail boots, what and when to eat, etc.—and if a climber follow the directions laid down by this guide, he will be able to put forth his best energies with the maximum amount of ease to himself and safety to his companions.

There is a chapter devoted to "The Lady Mountaineer," which will give women to whom the sport is new some very valuable information.

ROY W. AYER.

HAROLD RAEBURN. *Mountaineering Art.* F. A. Stokes. 1920.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"A CLIMBER'S GUIDE TO THE ROCKY MOUNTAINS OF CANADA."

All mountain-climbers and mountain-lovers to whom the Canadian Rockies present a fascinating field of study and recreation will welcome this carefully prepared guide-book. Within its 183 pages of condensed reading matter it furnishes concise information regarding more than four hundred peaks, compiled from the most reliable sources; this information includes locations, elevations, lists of references to each peak which have elsewhere appeared in print, notes of authenticated ascents, and practical descriptions of all known routes of ascent. A series of well indexed maps, based on government publications, covers the large area embraced, which extends from the United States boundary 450 miles north to Mt. Sir Alexander.

The systematic arrangement and manner of presentation of the data are admirable. Notwithstanding the vast amount of information contained, the book is of convenient pocket size. The practical criticism may be made, however, that it is unnecessarily heavy. The book is obviously planned for use on knapsack trips, where one begrudges every ounce of extra burden; under such conditions it would be a joy to handle a light-weight pocket companion. It is to be hoped that the second edition will not be printed on heavy glazed stock.

The authors, one of whom is a Mazama, are to be congratulated on their excellent achievement, which represents a great amount of work and a true love of the subject.

JAMIESON PARKER.

HOWARD PALMER and J. MONROE THORINGTON. *A Climber's Guide to the Rocky Mountains of Canada.* Knickerbocker Press. 1921.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"WAITING IN THE WILDERNESS."

In this book Mr. Mills takes us right into the wilds with him, and we actually feel the throb and pulsation of nature through a nature-lover's own experiences. The wild folk of the high peaks of the Rocky Mountains as well as those of the prairies become our friends through his able introductions.

The interesting, industrious beaver, with the playful side of his life; the happy black bear, the comedian of the mountains; the grizzly (not so grizzly in Mr. Mills' eyes); the much talked about ground-hog;—these and many other wild animals have first-hand stories told in such an interesting way that both young and old may thoroughly enjoy them.

Mr. Mills has a keen sense of humor. His experiences in glissading, from off the Rockies and in conjunction with huge snow-slides, would put some of the ablest Mazamas to shame. The difficulties, dangers and privations on the one hand, and the adventure, grandeur, and peace on the other, found in his great out-of-doors, are given to us whole-heartedly and without reserve.

Though each chapter is an interesting unit, the entire book will hold one's attention to the end like an absorbing work of fiction.

MARY E. POWELL.

ENOS A. MILLS. *Waiting in the Wilderness.* Doubleday, Page.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"THE CONSERVATION OF THE WILD LIFE OF CANADA." It is a rare occurrence when one obtains a "close-up" view of the wild bird and other animal life in the great out-of-doors. When such an event does occur, it gives one a sort of superior feeling, the camper or mountaineer knowing full well that few of his fellow-men have been so favored. The thrill is many times multiplied, however, and a peculiar satisfaction is obtained, if one gains an intimate knowledge of the species in view.

The author of this book does not pretend to go very deeply into the origin or anatomical features of the wild life of Canada; but his generous use of illustrations and his very delightful descriptions of the habitat and characteristics of each bird or quadruped give one a closer acquaintance with it. And what is of still greater interest to lovers of the wild, he very clearly describes the work already accomplished and the need of more to be done towards the conservation of these creatures. Mr. Hewitt has also included in his work statistical data that are interesting and of reasonable brevity, and shows the locations of game preserves and bird sanctuaries throughout Canada. E. T. VALLIANT.

C. GORDON HEWITT. D. Sc. *The Conservation of the Wild Life of Canada.* Scribner. 1921. (Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"DOWN THE COLUMBIA." This book, written in Lewis R. Freeman's free and easy manner, is a vivid chronicle of the experiences of a true sportsman and lover of the out-of-doors, on a boating trip from the headwaters of the Columbia, where it rises in the Selkirks and Rockies, to the mouth of the Willamette. The book is written in an interesting and fascinating manner and generously illustrated with pictures taken en route. To "The Achilles of Rivers," as the Columbia is described, he gives first place in his memories of boating trips on the mightiest rivers of the world. Mr. Freeman is perhaps the first man to navigate by boat almost the full length of the Columbia and record his experiences. This narrative is of particular interest to us because it relates to our own river and country, with which we are all so familiar.

MARGUERITE COLPITTS.

LEWIS R. FREEMAN. *Down the Columbia.* Dodd, Mead. 1921. $3.50. (Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"WESTWARD HOBOES." "Westward Hoboes" is a vivid and amusing account of the unique experiences of two Boston girls in making an eleven-thousand-mile motor trip through the Rio Grande country and thence northward, following the ridge-pole of the Rockies from Mexico to Canada, and east by way of the northern states. Colorful impressions of the Indian country of Arizona and New Mexico, along with descriptions of the natural wonders and places of scenic or historical interest, fill the slightly less than four hundred pages of the book. The whole is in humorous vein, and you share with the author and her artist friend in all the hardships and mishaps that go with pioneer motoring through country ordinarily missed by the tourist. Moreover, you may enjoy with them the types encountered throughout the journey, from the chivalrous garage-keeper of the South who "never made any charge to ladies" to the over-cautious old Indiana woman who refused them a night's shelter. MARY GENE SMITH.

WINIFRED HAWKRIDGE DIXON. *Westward Hoboes.* Scribner. 1921. $4.00. (Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"Trailmakers of the Northwest." The adventures of the courageous men who pushed the bounds of civilization westward are described in "Trailmakers of the Northwest." The opening chapters tell of the beaver,—its habits and its connection, as a fur-bearing animal, with the early settlement of the country. Then follow descriptions of the explorations which resulted in the discovery of Hudson Bay and the Great Lakes, the founding of the Hudson Bay Company, the search for copper deposits, the efforts to reach the western sea, and Mackenzie's success in attaining the Arctic and the Pacific. Adventures in fur trading, methods of travel, hunting the buffalo and other animals, and Indian life, are touched upon. Later explorations in the Canadian Northwest, how Amundsen made the Northwest Passage, the coming of the settlers, and something of present-day trappers and prospectors, complete the tale.

The work is carefully prepared and shows the author's acquaintance with the writings of the early explorers. A list of books is given in the appendix, inviting further reading on the subject-matter. A map showing plainly the trails to the west supplements the text. The book is profusely illustrated.

Though the contents of the book are mainly historical, it is cleverly enlivened with stories, and the entire narrative is presented in an instructive and entertaining manner.

Margaret A. Griffin.

Paul Leland Haworth. *Trailmakers of the Northwest.* Scribner. 1921. $2.50.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"Edge of the Jungle." It is rarely indeed that one has the pleasure of reading so charming a book as this latest published work of William Beebe, of the New York Zoological Society. It consists of a series of essays which originally appeared in *The Atlantic Monthly, Harper's Magazine,* and *House and Garden,* and all who have become acquainted with the author's magazine articles will need no introduction. He is a learned scientist, an intensely human philosopher, and a writer of delightful English. His most engaging trait is an utter lack of sophistication, evidenced in his enthusiasm for all of nature and his profoundly impressionable imagination. His observations on wild life are never mere statements of fact, but teem with animation and interest; philosophy and artistry combine when, by a deftly-painted word-picture, you are made to sense the sounds, colors and odors of a night in the tropics and the emotions which they arouse; and, strongest of all other impressions, he leaves you with a feeling of sympathy towards nature and a reverence for the intangible mysteries which still remain after science has said the last word.

Jamieson Parker.

William Beebe. *Edge of the Jungle.* Holt. 1921.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

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BUNNAGE, R. H., 696 Sherrett Ave.
BURCE, JESSIE M., 181 Rutland Terr.
BURGLUND, E. E. 452 Morrison St.

Burns, Mrs. Agnes Plummer, Box 106, Troy (Wallowa County), Ore.
Buse, Walter F., 52 Holgate Moorage.
Buse, Mrs. Walter F., 52 Holgate Moorage.
Bush, J. C., R. F. D. 4, Box 506.
Calhoun, Mrs. Harriet, 367 E. 34th St.
Calverley, George E., Route 3, Box 85, Oregon City, Ore.
Calverley, Robert V., Route 3, Box 85, Oregon City, Ore.
Campbell, David, 654 Everett St.
Campbell, Grace, 353 Harrison St.
Campbell, P. L., 1170 13th Ave. E., Eugene, Ore.
Carl, Mrs. Beulah Miller, 1172 Minnesota Ave.
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Christianson, William D., 147 Dundas St., London, Ont.
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Clark, J. Homer, 92 Front St.
Clarke, Mrs. Auril K., Route A, Box 106, Eugene, Ore.
Clarke, Roy H., 195 N. Grand Ave.
Clarke, Warren G., Route A, Box 106, Eugene, Ore.
Clodfelter, Vivian Lucille, 1221 E. Madison St.
Colborn, Mrs. Avis Edwards, Box 33, Clovis, New Mexico.
Collins, W. G., 510 32nd Ave. S., Seattle, Wash.
Colpitts, Marguerite, Campbell Hill Hotel.
Conrad, A. J., 809 E. 76th St. N.
Conway, T. Raymond, 1727 E. Yamhill St.
Cook, Dorothy E., Public Library.
Cook, Vera E., 1798 Woolsey St.
Cooper, Miss M. A., 664 E. Pine St.
Corning, H. I., 255 Cherry St.
Corning, Mrs. H. I., 255 Cherry St.
Corrigan, Lea, 484 E. 49th St.
Coursen, Edgar E., 658 Lovejoy St.
*Coville, F. V., Dept. of Agriculture, Washington, D. C.
Cowan, Earl, 693 E. Couch St.
Cowperthwaite, Julia F., 335 14th St.
Crawfort, Arthur, 711 Northwestern Bank Bldg.
Crout, Nelle C., 1326 Tillamook St.
Cruickshank, Ruby, 452 E. 14th St. N.
Cummins, Marion L., 1141 Carlton Ave.
Currier, George H., P. O. Box 526, Phoenix, Ariz.
*Curtis, Edward S., 614 2nd Ave., Seattle, Wash.
Cushing, Mildred, 3 Rose Friend Apts.
Cushman, Clyde H., 1019 E. 13th St. N.
Cutting, Ruth M., 240 E. 16th St.
Davidson, Earl N., P. O. Box 2057.
Davidson, R. J., 701 E. 60th St. N.
Day, Bessie, 690 Olive St., Eugene, Ore.
De Carie, Anne E. M., 786 Kerby St.
De Lacy, Beatrice, 7 Buena Vista Park, Cambridge, Mass.
*Diller, Joseph S., U. S. Geological Survey, Washington, D. C.
Dillinger, Mrs. C. E., 1198 Powell St.
Dimitry, Theodore, 269 Grand Ave.
Donald, Kathryn, 921 Beaverton Ave.
Dowling, Colista M., 742 Belmont St.
Dowling, Eugene H., 742 Belmont St.
Drack, Elsie F., 1201 E. Union St., Seattle, Wash.
Dudley, Alexander P., 171 E. 24th St. N.
Dudley, Mrs. Alexander P., 171 E. 24th St. N.
Duffy, Margaret, 467 E. 12th St.
Dyer, R. L., 607 Securities Bldg., Seattle, Wash.
Easton, Charles F., 209 W. Holly St., Bellingham, Wash.
Edgar, John R., Dee, Ore.
Edwards, Alice L., Rhode Island State College, Kingston, R. I.
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English, Nelson, 148 5th St.
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Evans, William W., 744 Montgomery Drive.

Evans, Mrs. William W., 744 Montgomery Drive.
Evanson, Arthur H., Meier & Frank Co.
Everson, F. L., 52 Lucretia St.
Fallman, Nina A., 301 W. Park St.
Farrah, Donald, 700 E. 26th St., Vancouver, Wash.
Farrell, Thomas J., 328 E. 25th St.
Farrelly, Jane A., 1072 E. 29th St. N.
Filloon, R. M., U. S. Forest Service.
Finley, Irene, 651 E. Madison St.
Finley, William L., 651 E. Madison St.
Fish, Elma L., 473 E. 45th St. N.
Fitz, Elizabeth, Madison Park Apts.
Fleming, Margaret A., P. O. Box 479.
Ford, G. L., 1101 E. 19th St. N.
Fordyce, C. R., 1701 Stone St., Falls City, Neb.
Forman, W. P., 128 N. 18th St.
Forsyth, James R., 1028 Williams Ave.
Foster, Forrest L., 354 E. 49th St. S. E.
Foster, W. C., 224 Glenn Ave.
Fowler, Marcella A., 230 10th St.
Fragmeier, Freda, 335 19th St.
Franklin, F. G., Willamette University, Salem, Ore.
Franing, Eleanor, 1119 N. Broad St., Galesburg, Ill.
Frazer, Kenneth F., 1501 Yeon Bldg.
Freed, H. A., 697 Marshall St.
French, Boyd, 714 W. 13th St., Vancouver, Wash.
French, S. H. J., Campbell Hotel.
Fries, Samuel M., 691 Flanders St.
Fritsch, Louis, 283 13th St.
Fuhr, Lillian L., 299 E. Lombard St.
Fuller, Frank, 5614 39th Ave. S. E.
Fuller, Margaret E., 1873 E. Salmon St.
Gardner, Harry W., 30 N. 20th St.
Gardner, Mrs. Harry W., 30 N. 20th St.
Gardner, Bernice J., 426 Harrison St.
Gardner, Ruth Harbison, P. O. Box 2, 556 5th St., Hillsboro, Ore.
Gasch, Martha M., 9 E. 15th St. N.
Gerber, Mrs. Laura S., Route 1, Box 3, Milwaukie, Ore.
Giesecke, F., 289 Yamhill St.
Gilbert, Clarence H., 830 Clackamas St.
Gilbert, Harold S., 384 Yamhill St.
Gilbertson, Martha, 730 Irving St.
Gile, Eleanor E., 622 Kearney St.
Gilmour, W. A., P. O. Drawer 731, Barnes Road, R. F. D. 2.
Gleyre, Mrs. Elsie M., Pueblo, Colo.
Glisan, Rodney L., 612 Spalding Bldg.
Goddard, A. V., 503 E. Ankeny St.
Goldapp, Martha Olga., 454 Mason St.
**Gorman, M. W., Forestry Bldg.
Graf, S. H., 2260 Monroe St., Corvallis, Ore.
Grashorn, Elfie, 350 Marguerite Ave.
Grassl, Mrs. Charles W., 547 E. 39th St.
Graves, Henry S., 1731 H St. N. W., Washington, D. C.
*Greeley, Gen. A. W., Center Conway, N. H.
Grenfell, Mrs. W. R., 221 E. 21st St. N.
Griesel, Mrs. W. F., 1144 Hawthorne Ave.
Griffin, Margaret A., 814 Spalding Bldg.
Griffith, B. W., 417 Boyd St., Los Angeles, Cal.
Habbe, John F., 704 Fletcher Trust Bldg., Indianapolis, Ind.
Haffenden, A. H. S., 4236 49th Ave. S. E.
Hall, Harry B., 1840 E. Glisan St.
Hall, Howard B., 1192 E. Pine St.
Hall, Mrs. Howard B., 1192 E. Pine St.
Hancock, A. W., 92 E. 69th St. N.
Hansen, Bessie L., 577 Kerby St.
Hansen, Ruth E., 577 Kerby St.
Hardesty, William P., Portland, Ore
Harlan, Edward G., University Club, Tacoma, Wash.
Harper, Ira H., 2801 H. St., Vancouver, Wash.
Harper, Mrs. Ira H, 2801 H St., Vancouver, Wash.
Harper, Robert F., 210 11th St.
Harroun, Norman, 400 Monroe St.
Hart, E. Nene, 409 E. 15th St., Vancouver, Wash.
Hartness, George, 671 Clackamas St.
Harvey, George H., Jr., 3120 W. 23rd Ave., Denver, Colo.
Hawkins, E. R., 501 Wells Fargo Bldg.
Hawley, J. M., 722 Schuyler St.
Hayhurst, C. W., 240 Stark St.
Hazard, Joseph T., 4050 1st Ave. N. E., Seattle, Wash.
Hazen, Todd, 602 Wilcox Bldg.
Hedene, Paul F., 720 E. 22nd St. N.
Helm, Jean, 166 N. E. 29th St.

HELSBY, BEATRICE, 304 S. High St., Oregon City, Ore.
HEMPY, M. RAYMOND, M. A. A. C.
HENDERSON, G. P., 1087 Belmont St.
HENDERSON, IVA C., 1225 Ivon St.
HENDRICKSON, J. HUNT, 610-611 Spalding Bldg.
HENKEL, FRED C., 273 Graham Ave.
HENRY, EARLE G., Newberg, Ore.
HENRY, LEONA, 809 E. 76th St. N.
HENRY, RUBY V., 809 E. 76th St. N.
HENTHORNE, MARY C., 711 E. Yamhill St.
HERMANN, HELEN M., 965 Kerby St.
HERREN, PAUL A., 636 E. 17th St. N.
HEWITSON, JOHN ROSS, 929 Gantenbein Ave.
HIGH, AUGUSTUS, 300 W. 13th St., Vancouver, Wash.
HILTON, FRANK H., 426 Northwestern Bank Bldg.
HIMES, GEORGE H., Oregon Historical Society.
HINE, A. R., 955 E. Taylor St.
HOCKINSON, N. R., 339 Hancock St.
HODGSON, CASPER W., Rockland Ave., Park Hill, Yonkers, New York.
HOFF, CLARICE L., 15 Oronoco Apts., Stewart and Terry St.., Seattle, Wash.
HOGAN, CLARENCE, 862 E. 32nd St. N.
HOLCOMBE, GLENNA, 285 Benton St.
HOLLISTER, HELEN, Ladd & Tilton Bank.
HOLMES, EDWIN L., 598½ Salmon St.
HOLMAN, F. C., P. O. Box 82, San Diego, Cal.
HOPPER, ELIZABETH, 1010 Selling Bldg.
HOSKINS, NAOMI M., Bend, Ore.
HOWES, CORA M., 628 Montgomery St.
HUNTER, JENNIE, 790 Gantenbein Ave.
HUSTON, ZETTA A., 1227 Ivon St.
HUTCHINSON, ROBERT P., Hood River, Ore.
INGHAM, FLORENCE, 1181 Harold St.
INGHAM, THEODORA, 1181 Harold St.
IVANAKEFF, PASHO, 246 Clackamas St.
JAEGER, J. P., 131 Sixth St.
JAENICKE, A. J., U. S. Forest Service.
JAMES, NEILL, 223 E. 20th St.
JANE, GWENDOLEN, 724 E. Madison St.
JENNINGS, G. T., 4711 72nd St. S. E.
JENNINGS, LOUISE, Whitwood Court.
JENSEN, ROLF N., 462 E. Mill St.
JEPPESEN, ALICE, 891 Albina Ave.
JOHNSON, ARTHUR H., 565 E. 62nd St. N.
JOHNSON, ERNSYL F., Portland, Ore.
JOHNSON, FRED J., Box 25, Barons, Alberta, Can.
JOHNSON, LULA D., 1635 E. 16th St.
JONES, F. I., 307 Davis St.
JOYCE, ALICE V., College of Agriculture, Tucson, Ariz.
KACH, F. G., Box 3971.
KALTENBACH, ELSIE, R. F. D. 1, Milwaukie, Ore.
KANE, HELEN EVA, 488 E. Alder St.
KELLETT, SUSANNA, 871 E. Madison St.
KERN, EMMA B., 704 Lovejoy St.
KERR, D. T., 556 Morgan Bldg.
KETCHUM, VERNE L., 4920 82nd St. S. E.
KIMMEY, PAUL C., 140 N. 16th St.
KING, A. E., 617 Salmon St.
KOEHLER, K. H., Eastern & Western Lumber Co.
KOENNECKE, MARIE, Sandy, Ore.
KREGNESS, MARY M., 400 N. 25th St.
KRESS, CHARLOTTE, 1102 Vinton Bldg., Detroit, Mich.
KROGSTAD, GERDA, 948 Cleveland Ave.
KRUMREY, ANNA M., 380 10th St.
KRUSE, JOHANNA, Route 4.
KUENEKE, ALMA R., 869 Clinton St.
KUHN, WAYNE E., 175 W. Sumner St.
KUNKEL, HARRIET, 2222 Warren Ave., Seattle, Wash.
KUNKEL, KATHERINE, 406 Northwestern Bank Bldg.
LA MADE, ERIC, Couch Bldg.
LABHART, C. W., 1405 Northwestern Bank Bldg.
LADD, HENRY A., Ladd & Tilton Bank.
LADD, W. M., Ladd & Tilton Bank.
LANDIS, MARTHA, 2019 E. Main St.
LANG, WALTER, Gasco Bldg.
LAWFFER, G. A., 1101 E 19th St. N.
LEACH, JOHN R., 6616 Foster Road.
LEADBETTER, F. W., 795 Park Ave.
LEE, FAIRMAN B., 1217 6th Ave. W., Seattle, Wash.
LEE, JOHN A., Concord Bldg.
LEE, MRS. MARY KNAPP, 1089 Westover Drive.
LEITNER, EMMA, 130 E. 55th St.
LEITZ, EMIL G., 502 Jefferson St.
LETZ, JACQUES, State Bank of Portland.
LEVE, WALTER H., U. S. Forest Service.
LEWIS, CLYDE E., 733 E. 42nd St. N.
LEWIS, HENRY W., 742 E. 65th St. N.
LEWIS, L. C., 742 E. 65th St. N.
LEWIS, LUCY M., 105 N. 21st St., Corvallis, Ore.
LIBBY, HARRY C., 422 E. Stanton St.
LIND, ARTHUR, U. S. National Bank.
LOGGAN, CHARLES F., 461 Davis St.
LOUCKS, ETHEL MAE, 355 E. 8th St.N.

LUETTERS, F. P., 133 Vine St., Roselle, N. J.
LUND, WALTER, 191 N. Grand Ave.
LUTHER, C. V., 401-6 Selling Bldg.
MACDOUGALL, CHARLOTTE, 1017 10th Ave. W., Spokane, Wash.
MACGREGOR, RUTH, 1404 Mears St.
MACLEOD, HANNAH E., 554 E. Morrison St.
MAAS, ALFRED T., 568 E. 10th St.
MARBLE, W. B., 3147 Indiana Ave., Chicago, Ill.
MARCOTTE, HENRY, 218 E. 56th St., Kansas City, Mo.
MARCY, EDITH, 3212 Day St., Seattle, Wash.
MARSH, MRS. J. W., Underwood, Wash.
MARSHALL, A. H., P. O. Box 499, Vancouver, Wash.
MASON, ELLA SABINA, 409 Salmon St.
MATHIS, C. J., 5th and Morrison Sts.
MATSCHINER, J. T., 611 E. Broadway.
MATTHEWS, GEORGE E., 660 E. 59th St. N.
MATTHEWS, MRS. ELLA, 660 E. 59th St. N.
MATTLEY, MAUD, 495 Heights Terr.
MATTSON, DON P., Goldson, Ore.
MCARTHUR, LEWIS A., 561 Hawthorne Terrace.
MCBRIDE, AGNES, P. O. Box 383, Oswego, Ore.
MCCLAIN, M. F., Eugene, Ore.
MCCOLLOM, J. W., 553-557 Morgan Bldg.
MCCOY, SALLIE E., P. O. Box 627, Boise, Ida.
MCCREADY, SUE, 402 E. 16th St., Vancouver, Wash.
MCCUEN, MRS. J. W., 325 Washington St.
MCCULLOCH, CHARLES E., 240 E. 32nd St.
MCDERMOTH, MRS. NAN A., 767 Everett Ave., Palo Alto, Cal.
MCDONALD, MRS. LAURA, 354 E. 49th St.
MCELROY, FLORENCE, 954 Gladstone Ave.
MCGILVRA, C. T., 289 E. 47th St.
MCISAAC, R. J., Parkdale, Ore.
MCKALSON, FLOYD E., 929 Montana Ave.
MCKAUGHAN, HENRIETTA, The Journal.
MCKITTRICK, ELIZABETH, 723 Chamber of Commerce Bldg.
MCLAUGHLIN, SADIE, 648 Kline St.
MCMASTER, RUTH E., 660 E. Oak St.
MCNEIL, FLORENCE J., Central Library.
MCNEIL, FRED H., Chronicle Publishing Co., The Dalles, Ore.
MEARS, S. M., 721 Flanders St.
MEISSNER, LILLIE, 350 Marguerite Ave.
MEREDITH, MRS. C. M., 735 Hillsboro Ave.
MEREDITH, DAISEY LORENA, 263 Miles St.
MEREDITH, GEORGE, 8½ N. 11th St.
MEREDITH, HELEN E., 735 Hillsboro Ave.
*MERRIAM, C. HART, 1919 16th St. S. W., Washington, D. C.
MERTEN, CHARLES J , 307 Davis St.
MEYERS, C. I., 695 Milwaukie St.
MILES, SANFORD, 32 E. State St., Albion, N. Y.
MILLESON, EUGENE H., Dundee, Ore.
MILLS, ENOS A., Longs Peak, Estes Park, Colo.
MONROE, HARRIETT E., 1431 E. Salmon St.
MONTAGUE, JACK R., 1310 Yeon Bldg.
MONTAGUE, RICHARD W., 1310 Yeon Bldg.
MOORE, DUNCAN, 1303 Chamber of Commerce Bldg., Chicago, Ill.
MOORE, MERLE S , 915 Thurman St.
MORGAN, MRS. CHRISTINE N., Los Angeles, Cal.
MORTENSEN, CARL J., 464 Rodney Ave.
MORTON, GRANT J., 518 Tabor Opera House Bldg., Denver, Colo.
MUELLHAUPT, OSCAR W. T., 407-409 U. S. National Bank Bldg.
MULLIN, R. E., 206 E. 8th St., Vancouver, Wash.
MURFREE, KENNETH W., 195 N. Grand Ave.
MURRAY, W. J., 84 Marion St., Seattle, Wash.
NEELS, CARL, 495 Jefferson St.
NELSON, BUELL C., 529 Yamhill St.
NELSON, L. A., 1207 Yeon Bldg.
NELSON, N. B., 232 Broadway.
NELSON, CLARA A., 816 N. Edison St.
NEWELL, BEN W., Ladd & Tilton Bank.
NEWHALL, ROGER, 100 Grand Ave.
NEWLIN, HAROLD V., 730 Chamber of Commerce Bldg.
NEWTON, JOSEPHINE, 1350 Pine St., Philadelphia, Pa.
NICKELL, ANNA, 37 Leonce Apts., 1415 Boren Ave., Seattle, Wash.
NICKLES, SIDNEY, 801 Multnomah St.
**NILSSON, MARTHA E., 320 N. E. 11th St.
NORDEEN, EDITH, 361 Graham Ave.
NORMAN, M. OSCAR, 698 E. 62nd St. N.

NUNAN, CINITA, 489 W. Park St.
OBERG, A. W., Hughson, Cal.
OGLESBY, ETTA, 818 Lombard St.
OLSEN, DORIS, Portland, Ore.
OLSON, RUTH, 919 Borthwick St.
ORMANDY, HARRY W., 501 Weidler St.
ORMANDY, JAMES A., 501 Weidler St.
OSBORNE, DOROTHY, 783 Yale St.
OSVOLD, RALPH M., 552 Belmont St.
OTIS, EMILY, Brown Apts.
OLIVER, ELLA D., Bend, Ore.
PAETH, WILLIAM J., U. S. Forest Service, Olympia, Wash.
**PARKER, ALFRED F., 374 E. 51st St.
PARKER, JAMIESON, 374 E. 51st St.
PARKER, ROSE F., Route 1, Box 58, Milwaukie, Ore.
PARKER, MRS. W., Route 1, Box 34, Milwaukie, Ore.
PARSONS, MRS. M. R., Mosswood Road, University Hill, Berkeley, Cal.
PATTULLO, A. S., 500 Concord Bldg.
PAUER, JOHN, 1625 26th St., Sacramento, Cal.
PAYTON, PERLEE G., 3916 64th St. S. E.
PENDLETON, CECIL M., Portland, Ore.
PENLAND, JOHN R., P. O. Box 345, Albany, Ore.
PENWELL, ESTHER, 362 California St., Santa Cruz, Cal.
PERRY, R. A., 4924 E. 66th St. S. E.
PETERSEN, AUGUST, 268 Nartilla St.
PETERSON, ARTHUR S., 537 E. 8th St. N.
PETERSON, MRS. ARTHUR S., 537 E. 8th St. N.
PETERSON, E. F., 780 Williams Ave.
PETERSON, MRS. HUGH, R. F. D. 1, Warrenton, Ore.
PETERSON, LAURA H., 395½ Clifton St.
PHILLIPS, MABEL F., 335 14th St.
PIERCE, BELLE, 1406 W. 39th St., Vancouver, Wash.
PIERCE, MARIE M., 1406 W. 39th St., Vancouver, Wash.
PILKINGTON, THOMAS J., San Anselmo, Cal.
PITTENGER, MRS. JESSIE B., 410 Imperial Arms Apts.
PLATT, ARTHUR D., 211 E. 55th St.
PLUMB, H. L., U. S. Forest Service, Bend, Ore.
PLUMMER, ROGER S., 461 E. 15th St. N.
POWELL, MARY E., 1330 E. Taylor St.
POWER, MRS. MARION S., Cathlamet, Wash.
PRENTYS, R. P. W., 764 Montgomery Drive.
PRENTYS, MRS. R. P. W., 764 Montgomery Drive.
PRICE, BERYL E., 29th and K Sts., Vancouver, Wash.
PRIDEMORE, L. F., Government Camp Hotel, Zigzag, Ore.
PRIDEMORE, MRS. L. F., Government Camp Hotel, Zigzag, Oregon.
PRISKE, AGNES, General Delivery, Pocatello, Ida.
PUGH, LAURA E., 4811 34th Ave. S. E.
PURDY, J. EDGAR, Bend, Ore.
RAMSAY, LENA JEAN, 3053 16th St. N. W., Washington, D. C.
RANKIN, JOHN G., Blumauer-Frank Drug Co.
RANKIN, MILDRED, 568 Ladd Ave.
RAUCH, G. L., 902 Yeon Bldg.
RAUCH, MRS. MABEL E., 771 E. 72nd St. N.
RAYMOND, HAZEL A., 335 Hassalo St.
REDDEN, CECIL V., 314 W. 8th St., Vancouver, Wash.
REDMAN, FRANK M., 1014 Northwestern Bank Bldg.
*REID, HARRY FIELDING, Johns Hopkins University, Baltimore, Md.
REED, MRS. ROSE COURSEN, 308 Bush & Lane Bldg.
REED, R. H., 178 Ella St.
REGER, ELIZABETH M., 780 Kerby St.
RENFRO, JOE H., 41 W. Jessup St.
RENFRO, MRS. BESSIE M., 41 W. Jessup St.
REYNOLDS, FLOYD, 382 E. 31st St.
RICE, EDWIN L., 1191 E. Yamhill St.
RICHARDSON, JEAN, 131 E. 19th St.
RIDER, GEORGE L., 4135 79th St. S. E.
RIDER, MRS. GEORGE L., 4135 79th St. S. E.
RIDDELL, GEORGE X., Standard Oil Co., Tacoma, Wash.
RILEY, FRANK BRANCH, Chamber of Commerce Bldg.
RIMBACH, RUDOLPH, 285 Graham Ave.
RISELING, ROBERT F., 1426 Northwestern Bank Bldg.
ROBE, LEILA C., Hoyt Hotel.
ROBERTS, ARTHUR L., 608 Selling Bldg.
ROBERTS, ELLA PRISCILLA. 109 E. 48th St.
ROBERTS, J. M., 215 E. 10th St., Vancouver, Wash.
ROBERTS, MRS. MARY C., 608 Selling Bldg.
ROBINSON, EARL C., 660 Morgan Bldg.
ROLAND, C. W., 655 Everett St.
ROLAND, MRS. C. W., 655 Everett St.
ROOT, ANNA MILDRED, 346½ Montgomery St.
ROSE, JOHANNA, 1355 Sandy Blvd.

ROSENKRANS, F. A., 335 E. 21st St. N.
ROSS, LADNER V., 590 Main St.
ROSS, LINDSLEY W., 590 Main St.
ROSS, RHODA, 1219 N. E. 30th St.
ROSS, WILLIS W., Portland, Ore.
MOSS, MRS. WILLIS W., Portland, Ore.
ROTH, E. L., 1108 E. Main St.
RUCKER, WILLARD, 763 Everett St.
RUTQUIST, HARRY C., 1099 E. 27th St. N.
RYAN, MILDRED L., 643 Milwaukie St.
SAKRISON, C. H., 356 Fargo St.
SAKRISON, ETHEL C., 356 Fargo St.
SAMMONS, E. C., 544 N. E. 20th St.
SCHARPF, GRETCHEN, 429 E. 46th St. N.
SCHNEIDER, KATHERINE, 260 Hamilton Ave.
SCHRAMM, R. A., 240 Stark St.
SCHULDT, MRS. HELEN, 147 W. Emerson St.
SCOTT, JOHN D., 6th Floor, Electric Bldg.
SCOTT, ISABELLA J., 521 E. 11th St.
SCHWARZMANN, P. C., 430 E. 55th St.
SELF, NORA. Camas, Wash.
SEVERIN, WILLIAM C. E., Box 34, Route 1, Milwaukie, Ore.
SEYMOUR, DARWIN CY., First National Bank.
SHAVER, CORA M., R. F. D. 2, Hillsdale, Ore.
SHERMAN, MINET E., U. S. Forest Service.
SHEPARD, F. E., 430½ Mill St.
SHIELDS, LAWRENCE W., 171 N. E. 7th St.
SHIPLEY, J. W., Underwood, Wash.
**SHOLES, CHARLES H., 339 East Ave., 52, Los Angeles, Cal.
SHOLES, MRS. CHARLES H., 339 East Ave., 52, Los Angeles, Cal.
SIEBERTS, CONRAD J., 685 E. Stark St.
SIEBERTS, MRS. CONRAD J., 685 E. Stark St.
SILVER, ELSIE M., Ladd Estate Co., Concord Bldg.
SIMONSEN, CAMILLA, 1914 E. Yamhill St.
SKINNER, ARTHUR, M. A. A. C.
SKINNER, GRANT, Bend, Ore.
SLAGEL, ANNIE LAURIE, 774 Northrup St.
SMEDLEY, GEORGIAN E., 262 E. 16th St.
SMITH, ADRIAN E., 127 E. 39th St.
SMITH, EVA CATCHING, Marshfield, Ore.
SMITH, FRED L., 2101 Young St., Bellingham, Wash.
SMITH, KAN, Seattle, Wash.
SMITH, LEOTTA, 153 Court House.
SMITH, L. E., Bend, Ore.
SMITH, MARY GENE, Campbell Hill Hotel.
SMITH, W. E., Marshall-Wells Co.
SMITH, WINIFRED, 361 Glenn Ave.
SNEAD, J. L. S., 601 E. Broadway.
SNOKE, ESTHER, 666 Glisan St.
SPAETH, J. DUNCAN, Princeton, N. J.
SPEAR, GEORGE P., 1934 Glendale Blvd., Los Angeles, Cal.
STADTER, FRED W., 1440 Thompson St
STARKWEATHER, H. G., 602 Broadway Bldg.
STARR, NELLIE S., 519 N. E. 51st St.
*WILL G. STEEL, Crater Lake, Ore.
STEVENTON, JOSEPHINE, 483 E. 9th St. N.
STEWART, ROY C., 445 16th St.
STONE, MRS. W. E., 146 N. Grant St., Lafayette, Ind.
STOWELL, NELL F., 45 4th St.
STRINGER, A. R., JR., First National Bank.
SULLIVAN, F. F., 24 Hawthorne Apts., 251 12th St.
SVADE, A. HOWARD, 931 E. 7th St. N.
SYKES, HORACE, Care State Fire Marshal, Salem, Ore.
TANG, EMMA, 380 10th St.
TAYLOR, GLENN H., P. O. Box 4314.
TENNESON, ALICE M., Care of High School, Yakima, Wash.
TERRIL, C. T., Bend, Ore.
THATCHER, GUY W., 302 Sacramento St.
THAXTER, B. A., P. O. Box 832, 1062 Beulah Vista Terrace.
THEISS, PAUL J., 3921 64th St. S. E.
THOMAS, CLIFFORD O., Marmot, Ore.
THOMAS, EMMA M., Marmot, Ore.
THOMAS, H. H., Marmot, Ore.
THOMAS, MAXINE M., Marmot, Ore.
THOMPSON, VIRGINIA, 181 E. 12th St.
THORINGTON, J. MONROE, 2031 Chestnut St., Philadelphia, Pa.
THORNE, H. J., 755 E. 26th St. N.
TOMPKINS, MARGARET, Foot of Miles St.
TOWEY, MRS. GENE M., Seattle, Wash.
TRANT, JOHN P., 6 Ainsworth Bldg.
**TRAPP, MRS. LOLA CREIGHTON, 436 N. Brodie St., Fort William, Ontario, Can.
TREICHEL, CHESTER H., 535 Mall St.
TUCKER, RALPH J., Aurora, Ore.
TWEEDDALE, A. E., Multnomah Hotel.
VAILLANCOURT, H. C., 237 Cactus Drive.
VALLIANT, E. T., Waluga, Ore.
**VALLIANT, NITA B., St. Michaels, Md.

VAN ZANDT, DEAN, 1120 E. Grant St.
VAN BEBBER, L., 503 Fenton Bldg.
VERRY, W. L., 520 E. 10th St. N.
VILLAIR, MRS. MABEL R., Chiloquin, Ore.
VON RHEIN, CHARLES ESTES, St. Francis Apts., No. 52.
WAGENER, JESSIE, 505 Patton Road.
WALDORF, LOUIS W., 422 E. 42nd St. N.
WALSH, GRAYCE, 281 Couch St.
WALTER, RALPH M., 734 Borthwick St.
WARNER, CHARLES E., 515 Yamhill St.
WATZEK, A. R., 609 Northwestern Bank Bldg.
WEBB, ONEITA, 456 Vancouver Ave.
WEBER, WILMA L., Multnomah, Ore.
WEER, J. H., P. O. Box 1563, Tacoma, Wash.
WEIDMAN, ROBERT H., U. S. Forest Service.
WELCH, HAZEL A., 245 E. Broadway.
WELCH, JENNIE, Welches, Ore.
WELCKER, OSCAR R., 177 Fargo St.
WELCOME, LEON, 908 S. Jersey St.
WEST, MRS. MARGARET B., 443 E. 11th St.
WHITE, LEICESTER S., 1308 E. 32nd St.
WHITE, WILLIAM, 1211 Chestnut St., Philadelphia, Pa.
WHITESIDE, FREDERICK S., 245 Douglas Place.
WHITNEY, BERT S., 1054 Cleveland Ave.
WIGGINS, DOROTHY E., 1213 Vancouver Ave.
WILDER, GEORGE W., 431 W. Park St.
WIDMER, EDWIN. 655 Stark St.
WILLARD, CLARA, Willard, Wash.
WILLIAMS, A. BOYD, King Davis Apts.
WILLIAMS, MRS. A. BOYD, King Davis Apts.
WILLIAMS, GERTRUDE, 314 W. 8th St., Vancouver, Wash.
WILLIAMS, GEORGE M., 713 F St., Centralia, Wash.
WILLIAMS, IRA A., 417 Oregon Bldg.
WILLIAMS, MARY E., 714 Esther Ave., Vancouver, Wash.
WILSON, CHARLES G., Bend, Ore.
WILSON, MAUDILEEN, 433 Columbia St.
WILSON, RONALD M., U. S. Geological Survey, Washington, D. C.
WOELFER, LUCY, 1553 Hassalo St.
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Though born of earth, robed of the sky they are;
And the anointing radiance heaven distills
On their high brows, the air with glory fills.
The portals of the west are opened wide;
And lifted up, absolved from earthly ills,
All thoughts, a reverent throng, to worship glide.
The hills interpret heavenly mysteries,
The mysteries of Light,—an open book
Of Revelation: see, its leaves unfold
With crimson borderings, and lines of gold,
Where the rapt reader, though soul-deep his look,
Dreams of a glory deeper than he sees!

—*Lucy Larcom.*

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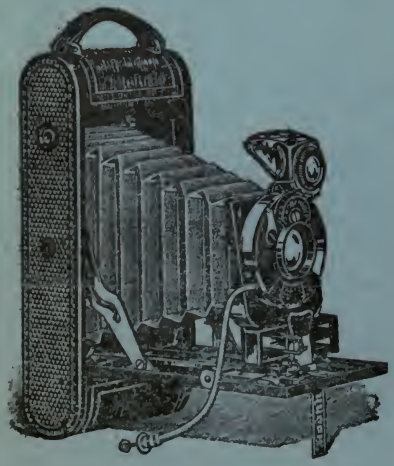

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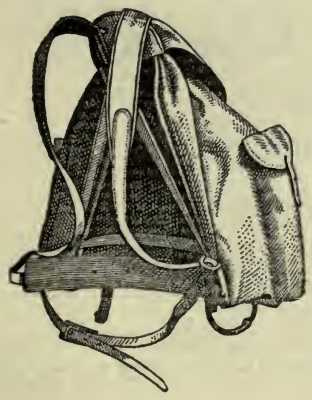

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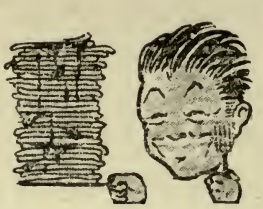

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A Record of Mountaineering in the Pacific Northwest

Edited by ROBERT W. OSBORN

VOLUME VI PORTLAND, OREGON, DECEMBER, 1922 NUMBER 3

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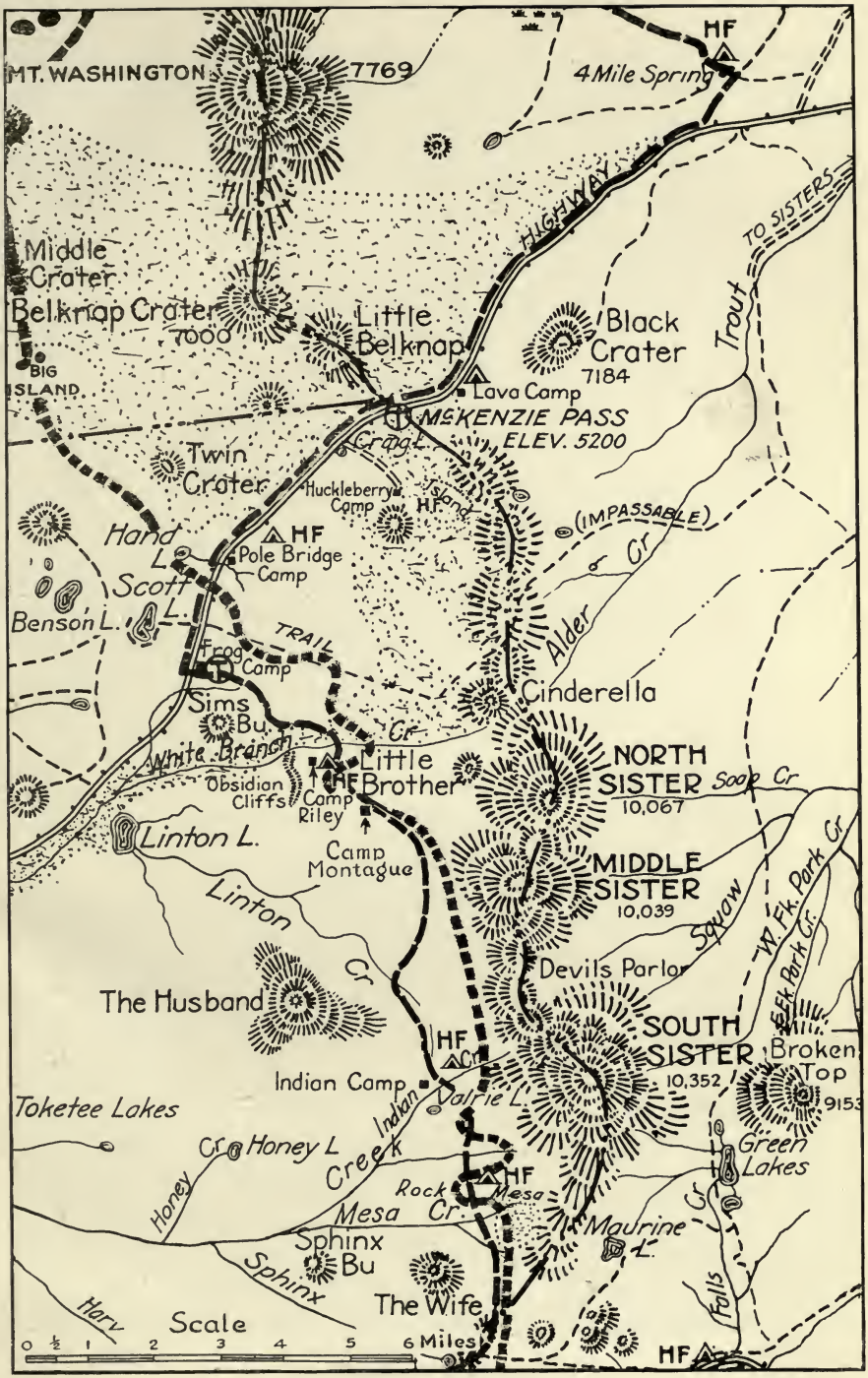
The stars are forth, the moon above the tops
Of the snow-shining mountains. Beautiful!
I linger yet with Nature, for the night
Hath been to me a more familiar face
Than that of man: and in her starry shade
Of dim and solitary loveliness
I learned the language of another world.

—*Byron.*



MAP OF THREE SISTERS DISTRICT

Photograph by Boychuk

The South Sister from Lost Creek.

MAZAMA

VOLUME VI PORTLAND, OREGON, DECEMBER, 1922 NUMBER 3

The Twenty-ninth Annual Mazama Outing

THE THREE SISTERS

By ALFRED F. PARKER

The region which, after careful consideration, the Mazamas chose for their 1922 outing was by no means *terra nova* in the history of the club's mountaineering activities. On three prior occasions, the latest being as recent as 1916, they had explored the country adjacent to the Three Sisters, that majestic trio of perpetual snow peaks situated in the very heart of the Cascade Mountains of Oregon. Each previous outing had proved so delightful, however, and the country so beautiful and interesting, that another visit was decided upon. To be sure, some members who had attended the 1916 encampment remarked—half jocularly, of course—that they had enjoyed themselves so much at that time that they did not care to go again, fearing that, no matter how good a time they had, something might occur to make their recollections of these mountains less pleasant.

On Saturday evening, August 5, the sleeping cars reserved for the Mazamas were attached to the Southern Pacific train leaving Portland at 1 a. m., and from 10 o'clock until almost leaving time the members of the party gradually assembled, and were assigned to their berths.

The next thing most of us knew was a nudge from the porter, accompanied by the words, "Five-thirty, sir!" and we sat up, rubbed our eyes, and realized that we were approaching Eugene. On our arrival there, soon after six o'clock, our coaches were detached from the train, and we left them to scatter in search of refreshment, for our automobiles were to leave at seven for the long drive ahead of us, and we had little time to lose. Some of us were so fortunate as to be invited by friends to their homes for breakfast.

At the appointed time the party gathered again at the station, augmented by a contingent of Eugene Mazamas. We were assigned to our machines with promptness and efficiency, and in a very short

time were bowling along over the Pacific Highway, on the start of our journey up the beautiful valley of the McKenzie River.

Turning east at Springfield, five miles from Eugene, we traversed prosperous farming country for a number of miles. Then gradually, almost imperceptibly, we began to enter the foot-hills of the Cascades, our road following the banks of the lovely, turbulent stream. The valley gradually narrowed, the hills became higher, and the farms gave way to forests, with an occasional cabin or summer cottage; charming little dwellings, many of them, partly covered by vines, and nestling close to the water's edge. Work on the road being in progress, we were obliged to make a number of detours, some of them rather rough, but by eleven o'clock we were at McKenzie Bridge, a small settlement and post-office, fifty-five miles from Eugene. Here we were served a delicious and bountiful meal. After a short rest we started again on the last lap of our ride, the remaining seventeen miles to Frog Camp, which is a few miles west of the summit of the McKenzie Pass, leading into eastern Oregon.

As we traversed roads good, bad, and indifferent, through forests and burnt-over tracts, the air became perceptibly lighter and more free from smoke, sub-alpine species of trees began to appear, and we realized that once more we were approaching that shrine of the Mazamas' annual pilgrimage, the high Cascades. After crossing Lost Creek we had our first unobstructed view of the North and Middle Sisters, serene and beautiful in the afternoon sun. By 4:30 the last car had arrived at Frog Camp, 4,750 feet above the sea.

After stopping for a few minutes to stretch ourselves, and to enjoy fresh peaches, thoughtfully provided by the Outing Committee, we started south over the Oregon Skyline Trail on the five-mile walk to our camp. Up and up we went, through a forest of pine, fir and hemlock, the vistas to the north and west becoming more and more extensive. After crossing the White Branch lava flow, the North and Middle Sisters burst into view again, this time close at hand, and almost before we had expected it we were passing Camp Riley, of 1916 fame. Less than a mile further, our white cook-tent came into view, and the well-known voice of our cook called out, "Want any hot soup or tea?"

Our old reliable LeRoy E. Anderson, veteran of many an annual outing, accompanied by our all-around handy man, Cecil M. Pendleton, and Harry Hall, the cook, had come up four days previously, and had camp all ready, even including flowers on the outdoor dining table. An admirable site had been chosen, among groves of fir and hemlock, on the slope of a little alpine valley. Just below us flowed a clear mountain brook.

The Middle Sister.

Photograph by Boychuk.

Photographs by Boychuk.

Left—Water polo, Middle Sister as spectator. Upper right—Followers of the Skyline Trail. Lower right—Prouty Memorial.

Dunnage bags were unpacked, and small tents soon began to dot the hillside, as each person proceeded in his own way to arrange his sleeping quarters and make himself comfortable for his two weeks of camp life. Most of us retired early that evening, somewhat weary, but with the feeling that another outing had commenced auspiciously.

On the following morning, August 7, a short "breaking in" trip was arranged, with Mr. W. C. Yoran as leader. Proceeding a short distance south of camp to Obsidian Falls, we climbed the bluff bounding the valley on the east. On the plateau above we had fine views of all three of the Sisters, and also Mt. Washington, Three-Fingered-Jack, and Mt. Jefferson, to the north. A number of small lakes were found, which we used for bathing and swimming during the entire outing. Strolling north, we soon came upon the site of our 1910 camp. Just above the camp is the huge mass of obsidian in which the ashes of our honored past president, Harley H. Prouty, were deposited in 1917, in accordance with his wishes.* As we gazed silently upon that wonderful prospect to the north, with mountains, mountains, mountains, rolling away into the purple distance, we thought that no more fitting resting place could have been found for the body of one who was, as his epitaph briefly describes him, "a lover of the mountains." After depositing some mountain flowers upon the tomb, we proceeded "home" by way of Camp Riley, where a number of thrifty souls salvaged boxes and water containers for use about their quarters.

As this trip had taken only half a day, the afternoon was spent in swimming and putting the final touches on individual camps. In the meantime, Mr. E. F. Peterson had taken a party of six for a "stroll" which ended in their climbing to the summit of the Middle Sister.

At the camp-fire that evening our camp was officially christened "Camp Montague," in honor of our popular president, Mr. Richard W. Montague.

The next day was somewhat more strenuous. Mr. Yoran acted as guide for a party of forty on a trip to Lost Creek Valley. This lovely valley, situated about six miles southwest from our camp, was so well described by Mrs. Henderson Daingerfield Norman, in "Mazama" for 1916, that I shall not attempt another description here, except to say that most of us agreed that nowhere had we seen a more exquisite array of mountain flowers than we found there. They literally carpet the valley's grassy floor, and the mental picture of banks of them beside the gently flowing, limpid mountain stream will linger forever in our memories. After exploring some cascades and falls at the lower end of the valley, we returned homeward in leisurely fashion. Two

*See "Mazama," 1917, p. 173.

enterprising young men, Messrs. Elmer Maxey and John R. Byers, made a circuit down the creek and back to camp via the McKenzie Highway and Frog Camp, a distance of over twenty miles.

On the same day, August 8, four stalwarts, Messrs. E. F. Peterson, Frank M. Redman, John R. Penland and Robert W. Osborn, set out in an attempt to scale Mt. Washington, fifteen miles north of the camp. An account of their experiences is given in a separate article in this number.

On August 9, thirty-five persons, Mr. Anderson leading, left camp at 7:15 a. m. for the Middle Sister. Proceeding directly towards the mountain, we were soon on its main northwest snow-field, which we traversed in a southerly direction until we reached the west ridge leading to the summit. From here a rock climb of about two thousand feet put us on the topmost point (10,038 feet) at 12:30 p. m. On the ascent we could see very little of the surrounding country, on account of the great banks of cloud which rolled in continuously from the south. Eastward, however, we had a fine panorama of central Oregon, with its lakes, forests, and wheat fields, and the distant Blue Mountains. Soon the clouds became thicker, and finally, enveloped us, so that we felt fortunate in having reached the top just before the curtain fell. After lunching and resting, we descended by the same route through intermittent banks of fog, and reached camp at 4:15.

While the Middle Sister climb was in progress, Mr. Yoran escorted a party of sixteen on an ascent of the Husband. This rugged peak, towering above the valley of Lost Creek, proved one of the most popular objectives for side-trips from Camp Montague. The view of the Sisters from its summit is truly magnificent, as it is very near to them and almost equidistant from all three.

The Mt. Washington party returned late that evening. They reported an interesting but arduous trip, having climbed to within five hundred feet of the summit of that formidable peak.

On the following day it was planned to start for the South Sister, but dark clouds threatened rain, and the Outing Committee very prudently decided to postpone the trip. The day was spent about camp. Many busied themselves in constructing a dam in the stream below, so that we might bathe there when we did not have the time or inclination to climb the steep hill to our swimming lakes. In the afternoon we had an exciting baseball game, played before an enthusiastic crowd of spectators.

Weeping skies greeted us on the morning of Friday, August 11. In spite of the rain, Mr. Yoran set out with a party of twenty-five for "Cinderella," or the Cinder Cone, a small mountain whose name describes

Photographs by Boychuk.

Upper—Climbing the Middle Sister.
Lower—All happy and all on top

Photographs by Boychuk.

Upper—The Husband. Lower—Little Brother. Three Sisters Outing

it, situated just north of the North Sister. Upon reaching the snout of Collier Glacier, near the base of the North Sister, the fog became so dense that it was thought best not to proceed further, as there would be no view from our objective point. Coming back a short distance, the leader selected a spot in a grove of firs, where a large fire was kindled, and we proceeded to dry out and have our lunch. After a pleasant hour we returned to camp. Mr. Yoran suggested that we stop just before reaching camp, light another fire and dry ourselves again, to induce the stay-at-homes to believe that we had succeeded in keeping out of the rain during the entire trip. Many were impatient to be back, however, and the nefarious scheme was abandoned.

On Saturday morning the rain was still falling, so that all scheduled trips were postponed. Some of the men made themselves useful by setting up our largest tent-fly over the dining table. This proved to be a great convenience, not only at meal hours, but during our evening camp-fire, which we lighted in front of it, giving everybody a fairly well sheltered place for sitting. Cards in the tents and chats around the camp-fires helped to while away the day pleasantly, though of course, we were all more or less impatient for the clouds to lift, so that we could proceed with our explorations.

Fifteen "first-weekers" left for their homes on Sunday morning, but their number was more than made up by the arrival of twenty-six others who had come in for the second week, among them being President Montague. He had been unavoidably prevented from joining us at the start. His genial presence made the rest of our stay much more enjoyable than it would have been without him.

In accordance with our usual custom, religious services were held that morning, with Rev. W. M. Case, of Eugene, officiating. He preached an interesting sermon, appropriate to the occasion. After lunch, the clouds at last began to lift, and Mr. Anderson led a party of about twenty on a short trip over the hills south of camp. While low-lying clouds to the south still obscured our view in that direction, the prospect to the north was very fine, as the heavy rains had cleared the atmosphere of all smoke. The Sisters were most impressive in their mantles of new snow, which lay lightly on their rocky ridges.

Monday, August 14, dawned clear. Sleeping bags were laid in the sun to dry, and the little inconveniences caused by the wet weather were soon forgotten. The Middle Sister, Husband, and Cinder Cone were successfully ascended by different parties, and another visited Lost Creek Valley. Those climbing the Middle Sister and Husband experienced those novel "hair-raising" sensations caused by a slight shock of static electricity. For a fraction of a second there was a

crackling noise in one's hair, and the scalp tingled, but it was over instantaneously, leaving everyone gaping with astonishment.*

The next day, August 15, was an eventful one. Five men, in charge of Mr. Penland, successfully ascended the topmost pinnacle of the North Sister. This is one of the most difficult and dangerous climbs in the entire range, and we felt proud that some of our members had been able to make it, without mishap. The party received a most vociferous welcome on its return. This peak was conquered again later in the week by five others, led by Mr. John A. Lee, who has described the trip in a separate article.

On the same day, another excursion to the Cinder Cone was made by eighteen of us, Mr. Frank M. Redman acting as leader. In reminiscence, this appears to many as one of the most enjoyable side-trips of the outing. The air was cool, the atmosphere clear, and the ascent easy enough to make climbing a truly unalloyed pleasure. The view of the forbidding north side of the North Sister, with its wild, castellated pinnacles, was most impressive, but it was not conducive to a desire for a closer acquaintance with her. In returning, we crossed the lower part of Collier Glacier, and stopped at a beautiful spot near the 1910 camp for a luncheon and tea party.

In the afternoon, a party of fifteen, with Mr. Anderson in charge, left for the South Sister. This peak, while the highest of the three (10,352 feet), is hardly more difficult of ascent than the Middle Sister, but as it lies about seven miles south of camp, over rough country, it was deemed advisable to start out in the afternoon, make a bivouac camp near the base, and climb on the following day. By this time it was too late, of course, for those who had been out all day to join Mr. Anderson's party, so it was decided that another party be sent out early on the following morning, under Mr. A. F. Parker. It is a moot question which is the most enjoyable way to make a trip of this kind; whether to take an extra half day, carrying one's sleeping outfit and resting at night, or to leave early and make it all in one day, unencumbered with packs.

At the camp-fire that evening we enjoyed having with us Mr. Lage Wernstedt, of the Forest Service, and Mrs. Wernstedt. They were on a tour of the Cascade National Forest, collecting data for use in map-making. Mr. Wernstedt gave us a very interesting lecture on this particular phase of his work, and explained in detail the photographic method, which is now so largely employed in the preparation of maps. This subject is described in a separate article.

It seemed to us that we had scarcely crawled into our sleeping

*See "Mazama," 1916, p .47.

Photograph by Boychuk.

Summer clouds on Lost Creek Meadows—Three Sisters Outing.

Photographs by R. W. Osborn and Lee Benedict.

. Upper left—South and Middle Sisters from North Sister. Upper right—Climbers on South Sister. View of Middle and North Sisters. Lower left—Group on summit. Lower right—Ice lake in crater on South Sister.

bags for the night, when at 3.30 the call of the bugle roused us from our slumbers. We breakfasted by candle-light, and promptly at 4:15, with the sky just becoming slightly gray in the east, and Orion peering over the shoulder of the Middle Sister, we set out for the South Sister, twenty-six strong. We followed the Skyline Trail for about a mile, until it began to lead too far west for our proper course. Then we bore to the left, crossing the ridges at a higher level, in order ro avoid loss of elevation. Night's candles were soon burned out, and a splendid sunrise greeted us as we crossed the plateau, with our goal clearly outlined against the sky ahead. At eight o'clock we were at the base of the mountain. Looking up, we could see the silhouettes of Mr. Anderson's party on the main west ridge, some two thousand feet above. Proceeding up the northwest ridge, without haste but with comparatively few stops, we reached the summit at about eleven, just as the first party were commencing their descent. The panorama was glorious. Diamond Peak, Cowhorn Mountain, Mt. Bailey, and Scott Peak, south of us, awakened memories of our 1921 outing. Eastward, we could see the Deschutes plateau, and the stacks of the sawmills at Bend, while northward every peak of the range as far as Mt. Hood stood out clearly. It was by far the most comprehensive outlook of the entire outing. The summit of this peak differs from that of either of her sisters, for it is an almost perfect crater, about a quarter of a mile in diameter, and filled evenly with snow almost to the rim. The North Sister culminates in a jagged pinnacle, and the Middle Sister in the apex of a fairly symmetrical rocky cone.

After an hour of rest and refreshment, we started the descent. Following almost the same route by which we had come in the morning we reached Camp Montague, somewhat fatigued but in good condition, at 4:45 p. m. The first party had rested for several hours at their bivouac camp near the west base of the mountain, and returned at almost the same time.

On this climb Master John Robert Penland, of Albany, aged seven, proved himself the hardy son of a hardy sire, by attaining the summit entirely unaided, and returning to camp apparently as fresh as ever. He had climbed the Middle Sister earlier in the week, thereby qualifying for the distinction of being the youngest of the Mazamas.

While the South Sister ascent was in progress, Messrs. Montague and T. M. Rogers led enjoyable excursions to the Husband and Lost Creek Valley, respectively.

On Thursday, August 17, we had a lazy, delightful time; probably it seemed all the more pleasant, after the arduous trip of Wednesday.

Swimming and tea parties filled the hours, and all too soon a gorgeous sunset marked the end of another happy day.

The next morning found the camp abustle again. Securing an early start, Mr. John A. Lee and four hardy followers set out for the North Sister. After breakfast twenty others left for the Middle Sister, thirteen for the Cinder Cone, and eleven for the Husband. Five swimming enthusiasts visited Benson Lake, seven miles to the northwest. In the early morning of this day the sky was almost clear, but before noon a heavy stratum of low-lying cloud began to drift in from the southwest. Gradually creeping up, about four o'clock it suddenly enveloped Camp Montague in a dense fog. Considerable concern was felt for some members of the Middle and North Sister parties who had not yet returned. To be overtaken by a blinding fog on the slopes of a glacial peak is sometimes a very serious matter. The bugle was blown, and several went south along the Skyline Trail to signal by whistling and shooting. This proved unnecessary, however, for under the skilful guidance, respectively, of Mr. John A. Lee and Mr. Lee Benedict, the remainder of both parties reached camp safely, much to our relief, just as darkness was descending.

Saturday, the 19th, brought the usual slight tinge of sadness which comes on the last day of an enjoyable outing. Our thoughts could not avoid turning to the cares which awaited us below, as we realized that we must so soon return to them. Many took short walks near camp to gaze once more on scenes which had become dear to us, and to take photographs, while others busied themselves in preparing for the anticipated festivities of the evening. At five o'clock we sat down to our last dinner at Camp Montague. It had been announced as the "President's dinner," and Chef Hall had spared no pains to make it a grand climax from a culinary standpoint.

The annual "graduation exercises" for those who had ascended any of the three major peaks during the outing, took place shortly after dinner. Dainty bouquets, a sweet-voiced choir and original songs featured the ceremonies, as each one, from the veteran John Lee to little Robert Penland, stepped forward and had his summit badges pinned on his breast. Those who had climbed their first mountain during the outing repeated in unison their class motto, "We got our blisters climbing the Sisters." This was followed by a short speech by President Montague, in his happiest style, and then all posed for the official group picture, under the direction of our energetic photographer, Mr. Walter Boychuk. Then came our last camp-fire, ended

by the singing of "Auld Lang Syne," and we realized that another Mazama outing was about to become history.

Early on Sunday morning dunnage bags were packed again, and we were soon retracing our steps of two weeks before, as we took the trail down to Frog Camp, where our automobiles awaited us. We made much faster time than in coming up, and arrived in Eugene with several hours to spare before the departure of our train. Then, bidding farewell to our good Eugene friends, we pulled out for home, and reached Portland at 9:45 p. m., very drowsy but feeling that we had stored up health and vitality which would serve us well in the busy days ahead.

No account of the outing would be complete without mention of those responsible for its success: the Outing Committee, and especially its capable chairman, Miss Martha E. Nilsson. Although still suffering from an injury to her knee (incurred several months before) and barely able to walk, she insisted upon going up to camp on horseback. Prevented from taking any of the side-trips, she stayed in camp for the full two weeks, and in her usual tactful, unobtrusive and efficient way managed every detail with such precision that the outing was not marred by a single slip in the arrangements.

After all, how inadequate is a mere matter-of-fact account of the actual occurrences of such an outing! The mental pictures as we recall the exquisite sunsets over valley and peak; the moon, rising through the fleeting clouds above the Middle Sister; the pleasant chats beside the camp-fire; the good sportsmanship and unselfishness of friends, tried and true; the thousand and one little incidents of those two happy weeks at Camp Montague—all these will, to the end of our days, bring back a flood of memories to which no written narrative can do justice.

Personnel of the Twenty-Ninth Annual Outing

‡J. E. Allison, Eugene, Ore.
**LeRoy E. Anderson, Portland, Ore.
‡Tillie Auer, Portland, Ore.
**Alma Bailey, Portland, Ore.
***Lee Benedict, Portland, Ore.
‡Mae Benedict, Portland, Ore.
‡Myrtle Benedict, Portland, Ore.
‡Henry J. Biddle, Vancouver, Wn.
‡Edmund Bidwell, Portland, Ore.
**Jessie Biles, Pender, Neb.
‡Walter Boychuk, Portland, Ore.
Jerry E. Bronaugh, Portland, Ore.
***John R. Byers, Portland, Ore.
**Agnes Campbell, Monmouth, Ore.
**Wm. Moll Case, Eugene, Ore.
‡Vivian Clodfelter, Portland, Ore.
**Maude W. Cooke, Oregon City, Ore.
‡Ruby Cruikshank, Portland, Ore.
Marion L. Cummins, Portland, Ore.

‡May Darling, Portland, Ore.
Bessie Day, Eugene, Ore.
**Gertrude Deutsch, Portland, Ore.
***Arthur J. Emmerich, Portland, Ore.
Henrietta H. Failing, Portland, Ore.
Selma P. Flodine, Portland, Ore.
*Kenneth Frazer, Portland, Ore.
*Bernice J. Gardner, Portland, Ore.
‡Paul Gardner, Portland, Ore.
*Martha Gasch, Portland, Ore.
**Albert W. Gentner, Portland, Ore.
**Naomi Gilbertson, Portland,Ore.
‡W. A. Gilmour, Portland, Ore.
**Harry Hall, Portland, Ore.
*Helen F. Hand, Corvallis, Ore.
**Robert F. Harper, Portland, Ore.
‡Nelle Heizer, Portland, Ore.
*Fay Hendrickson, Portland, Ore.
‡Oril Henthorne, Portland, Ore.
Mary C. Henthorne, Portland, Ore.
‡Cora Howes, Portland, Ore.
‡Jennie Hunter, Portland, Ore.
‡Alice C. Hutchinson, Portland, Ore.
‡N. E. Imhaus, Portland, Ore.
Louise Ingram, Portland, Ore.
**Neill James, Portland, Ore.
‡Martha Jensma, Portland, Ore.
*Ruth Karlson, Portland, Ore.
*Dorothy Knowlton, Portland, Ore.
‡Anna M. Krumrey, Portland,Ore.
*Mary Knapp Lee, Portland, Ore.
***John A. Lee, Portland, Ore.
*Charles F. Loggan, Portland,Ore.
**Ethel Mae Loucks, Portland, Ore.
***Elmer Maxey, Eugene, Ore.
Willis Miller, Portland, Ore.
‡Richard W. Montague, Portland, Ore.
‡Christine N. Morgan, Portland, Ore.
xW. K. Newell, Eugene, Ore.
‡Adah Nelson, Portland, Ore.
Martha E. Nilsson, Portland, Ore.
**Olive Oleson, Portland, Ore.
‡Ruth Olson, Portland, Ore.
***Robert W. Osborn, Portland, Ore.
‡Louise Parcher, Portland, Ore.
**Alfred F. Parker, Portland, Ore.
*Jamieson Parker. Portland, Ore.
**Cecil M. Pendleton, Portland, Ore.
***John Penland, Albany, Ore.
**Robert Penland, Albany, Ore.
‡August Peterson, Portland, Ore.
‡E. F. Peterson, Portland, Ore.
‡Arthur Platt, Portland, Ore.
‡Paul B. Powers, Portland, Ore.
***Frank Redman, Portland, Ore.
‡E. L. Rice, Portland, Ore.
‡Ella Priscilla Roberts, Portland, Ore.
‡T. M. Rogers, Portland, Ore.
Mrs. C. W. Roland, Portland,Ore.
C. W. Roland, Portland, Ore.
**Katherine Schneider, Portland, Ore.
***John D. Scott, Portland, Ore.
‡Helen Miller Senn, Portland, Ore.
Elsie M. Silver, Portland, Ore.
**Adrian Smith, Portland, Ore.
Josephine Steventon, Portland, Ore.
‡Gertrude Stith, Portland, Ore.
‡E. T. Taggart, Portland, Ore.
‡Mrs. E. T. Taggart, Portland, Ore.
**E. T. Valliant, Portland, Ore.
Myra B. Wahrer, Cleveland, O.
**Eyla Walker, Corvallis, Ore.
**Emma F. Waterman, Eugene, Ore.
**Hazel Weidler, Portland, Ore.
‡Annette Wiestling, Seattle, Wn.
‡Catherine W. B. Yocum, Eugene, Ore.
‡Harry B. Yocum, Eugene, Ore.
W. C. Yoran, Eugene, Ore.
Crissie C. Young, Portland, Ore.

* South Sister only.
** South and Middle Sisters.
*** South, Middle and North Sisters.

‡ Middle Sister only.
x North Sister only.

Photograph by Boychuk.

After the "graduation exercises," Three Sisters Outing.

Photograph by Boychuk.

A mountain meadow near the South Sister.

Notes *on the* Flora *of the* Three Sisters Region

By Henry J. Biddle

The writer has been asked to say a few words about the flowers which were blooming so abundantly on all sides of Camp Montague. But as he is only an amateur botanist, and unfortunately, took up this study only in recent years, he does not presume to speak with authority.

Some of the most interesting varieties were collected and sent to Washington for determination by Prof. Chas. V. Piper, but as these have not been heard from, no complete list of the species can be given. Of those named, nearly all are probably correctly determined. If some mistakes have been made in the specific determination, it is reasonably sure that they have been assigned to the proper genera.

And right here, it may be well to state that the species of flowers are not absolutely fixed types. As plants wander onto a new soil, and into a different climate, they undergo modification. These modifications, if sufficiently pronounced, form varieties, and if still more pronounced, new species develop. In short, plant life is like all other forms of life in following the universal law of evolution.

This is the plague of the amateur botanist. The plant he is trying to identify does not in all respects fit the description given in the book. Naturally, for that description was in all likelihood written from a specimen collected hundreds of miles distant, and growing under dissimilar conditions. At first this is discouraging to the beginner, but in the end it adds greatly to the fascination of the study of botany. For after one has learned to know the plants of one region, then on going into a new locality there is not only the excitement of finding new species, but the continual interest of noting the changes in size, color or other characters of the plants with which one is already acquainted.

The plants in the following list observed in the Three Sisters region are grouped according to the families in which they belong. The common names, when such exist and are not misleading are given after the botanical names. But to *know* the flowers one *must* know them by their botanical names. The common names vary with localities and individuals; are often applied indiscriminately to several species, and in the case of many of our most beautiful western flowers, no common names exist. The English names, in some cases recently invented by writers, can only by a misnomer be called "common" names. Only those flowers found blooming are noted:

LILIACEAE . . . . . LILY FAMILY

Veratrum viride. False Hellebore. A coarse leaved plant with a tall panicle of small, green flowers. Common in swampy places.

Calochortus sub-alpinus. One of many species of Mariposa Tulip. Flowers creamy white, with yellow hairs in center. Common.

POLYGONACEAE . . . . . BUCKWHEAT FAMILY

Eriogonum ovalifolium. With rosettes of creamy-white flowers, tinged with pink. Growing at high altitudes.

Eriogonum umbellatum. Like the preceding, but flowers yellow. The name Sulfur Flower is used by one writer for this species, and it is rather appropriate, but the flowers are tinged brownish-red in age. Common about camp.

Oxyria digyna. Mountain Sorrel. Only at high altitudes, and rather rare. Flowers inconspicuous, but beautiful when in seed.

Polygonum newberryi. Knotweed. A sprawling plant, with clean looking, light green leaves and inconspicuous flowers. Common.

Polygonum bistortoides. Edible Knotweed. Looking like the cultivated buckwheat, and in places in the northern mountains growing as if in fields. Not very common here.

PORTULACACEAE . . . . . PURSLANE FAMILY

Spraguea multiceps. Pussypaws. A low-growing plant, of high altitudes, with rosettes of pinkish flowers becoming pinker in age. Common.

RANUNCULACEAE . . . . . BUTTERCUP FAMILY

Delphinium. Species not determined. Blue Larkspur. Fairly common.

Aquilegia formosa. Columbine. Not very common.

CRUCIFERAE . . . . . MUSTARD FAMILY

Arabis lyallii. Growing at very high altitudes, flowers small, pink.

A small white mustard, collected at 7,500 feet, not yet determined.

SAXIFRAGACEAE . . . . . SAXIFRAGE FAMILY

Saxifraga tolmiei. This Saxifrage forms mats of tiny, glossy-green leaves, growing abundantly among the rocks at high altitudes. The flowers are small and white.

Saxifraga nelsonana. S. Oregana. S. bongardi. The first two on Lost Creek, the latter near the Cinder Cone. Rather rare.

ROSACEAE . . . . . ROSE FAMILY

Lutkea pectinata. Mountain Mats. Abundant at high altitudes. The finely dissected leaves have a moss-like effect, and often cover the ground over a considerable space. The small, white flowers are several on a stem about six inches high.

Rubus lasiococcus. Close to the blackberries, but resembling a strawberry. Common in the woods.

Potentilla flabellifolia. A variety of Cinquefoil, but this name is inappropriate, for our species has only three leaflets. It is one of the commonest flowers in the mountain meadows, and the yellow flowers cause it often to be mistaken for a buttercup. The genus *Potentilla* is easily distinguished from the buttercups by the presence of small bracts between the sepals.

LEGUMINOSAE . . . . . PEA FAMILY

Lupinus. Species not determined. A blue Lupin, common and beautiful.

Lupinus lyallii. A dwarf, blue Lupin with silvery leaves. This beautiful little flower often grows at very high altitudes, but in this region was only found at the relatively low elevation of Frog Camp.

ONAGRACEA . . . . . EVENING PRIMROSE FAMILY

Epilobium augustifolium. The well-known Fireweed.

Epilobium alpinum. Growing but a few inches high. One of many species difficult to distinguish.

ERICACEAE . . . . . HEATH FAMILY

Cassiope mertensiana. White Heather. Abundant in places.

Phyllodoce empetriformis. Pink Heather. With the preceding. Neither of these is a true heather, but they are commonly so called.

POLOMONIACEAE . . . . . PHLOX FAMILY

Polemonium. Species not determined. A small Jacob's Ladder, found blooming at about 9,800 feet elevation on the slope of the Middle Sister. It is very remarkable to find a blooming plant so far above what is usually the limit of vegetation.

Collomia debilis. A small pretty plant with dissected gray-green leaves and blue flowers. Growing at very high altitudes. Rare.

SCROPHULARIACEAE . . . . . SNAPDRAGON FAMILY

Pentstemon fruticosus. One of the many Pentstemons, with flowers of various purple and violet shades, growing only among the rocks.

Pentstemon procerus. The flowers in whorls, light blue to pinkish.

Pentstemon menziezii. Growing only at very high altitudes, the small leaves forming mats in the crevices of the rocks.

Chelone nemorosa. Turtlehead. Very like a Pentstemon, and often mistaken for one.

Veronica alpina. Alpine Speedwell. A pretty, small, blue flower in the swamps.

Mimulus lewisii. Pink Monkey Flower. Perhaps the most beautiful and showy of our mountain flowers. Growing only on water courses, and in swampy ground at moderate altitudes.

Mimulus. Species not determined. A yellow variety growing on Lost Creek.

Pedicularis racemosa. This genus is called in Europe Louse-wort, but is, nevertheless, beautiful and interesting. The species bears an abundance of flowers, creamy-white tinged with pink, and was very common in spots near camp.

Pedicularis bracteosa. This species has pinnately parted leaves, and whitish flowers.

Castilleja. Indian Paint Brush. One of the most beautiful and best known mountain flowers. It occurs in many species, hard to determine. Three of these were noted: One tall variety, with salmon-red flowers, varying little in color, growing in wet ground on Lost Creek. One, not so tall, growing on stony ground, and the color of every shade from bright scarlet to white. One, smaller yet, common near camp, the color light yellow to orange.

VALERIANACEA . . . . . VALERIAN FAMILY

Valeriana sitchensis. This wild Valerian is common in wet places in the mountains at moderate, and sometimes high, altitudes.

COMPOSITAE . . . . . ASTER FAMILY

While the flowers resembling the Asters and Daisies are easy to place in the family to which they belong, yet the very numerous species are difficult to determine. Most of the Composites found were collected and sent for determination.

There were three species of purple flowers resembling Asters, but perhaps none of them belonging to the genus *Aster*. On Lost Creek there was a *Senecio*, Rag-wort, and an *Arnica*, both yellow. At a very high altitude *Agoseris alpestris*, Mountain Daisy, was found. It is yellow, resembling the common Daisy. Two other flowers, one yellow and one brown, probably belonging to the genus *Agoseris*, were growing near camp.

While the writer regrets the incompleteness of these notes, yet it is hoped they may, to a slight degree, stimulate in some the desire to identify the flowers themselves. Nothing will add more to the pleasure of an outdoor trip, and once begun, the interest in the study will grow in intensity from year to year.

Ye living flowers that skirt the eternal frost!
Ye wild goats sporting round the eagle's nest!
Ye eagles. playmates of the mountain-storm!
Ye lightnings, the dread arrows of the clouds!
Ye signs and wonders of the element!
Utter forth God, and fill the hills with praise!

—*Coleridge.*

On the Skyline Trail—Three Sisters Outing.

Photograph by Boychuk.

"The Challenge of Mt. Washington." View from point above Prouty Memoiral.

Photograph by Boychuk.

The Challenge *of* Mt. Washington

By Robert W. Osborn

Mountain climbing, in reality, is never completed. You may scale a regular he-peak, cut a notch in your alpenstock and say, "Well, that's that," and discard the act as one might lay aside worn-out hiking boots, but the chances are many against one that you have just begun. Forsooth, in the first place, you have taken many photographs and you wreck your pocketbook obtaining every print that anyone else has taken of your favorite mountain; you report on the trip at the camp fire, at the reunion, in the club rooms, you repeat the story over and over again to friends and relatives, and finally you write about it for the Mazama Annual—and prepare to climb all over again. No. A mountain is never really climbed.

Dazzled by the glory of the spoken and written word, the writer may actually have been led to believe that he climbed Mt. Washington, but admonished now by the cherry-tree episode of the mountain's illustrious namesake, he very truthfully sets forth that Mt. Washington was not climbed by the "restless four," in fact, their puny efforts scarcely disturbed the mountain's mighty dignity; however, that's our story.

Well, on August 8, the second day of the 1922 Annual Mazama Outing at the Three Sisters, Ed Peterson, leader, John Penland, Frank Redman and the writer, three famous "outlaws" and an unsuspecting tenderfoot, departed from Camp Montague to meet the challenge of Mt. Washington, thrusting its pinnacle up out of the haze a many-mile hike away. A challenge it was, and a challenge it remains today to any man—or woman—who thrills at the feel of an alpenstock and spiked boots, because no man has yet stepped forth with the claim of having ascended Mt. Washington's 7,769 feet of jagged, treacherous crown.

The log of our journey runs thus: Camp Montague to Frog Camp, three miles; by automobile to Four Mile Spring, eleven miles; overland to base of mountain, eight miles; climb and encircling of Mt. Washington, two miles, and then return to Camp Montague by same route, in all, consuming two full days.

Peterson showed rare qualities of leadership; first in getting someone to carry his commissary, and second, by persuading John Penland that the road from Frog Camp, the "hopping-off" place for the Mazamas, to Four Mile Spring was a fine rock road, and that there was every reason why he should take his Dodge and save us that eleven-mile hike. Penland fell for the leader's insinuations, and after bouncing from

rock to rock across the terrific lava beds of the McKenzie Pass, he was all for returning to camp by way of the Santiam Road to Albany and Eugene, preferring the nearly 200 miles of that route to those terrible eleven.

Our first delay occurred at Windy Point, where a rock crusher was busy chewing up the lava barrier that in the past had brought many a heavily-laden wagon to grief. While waiting for the way to be cleared, Peterson led his cohorts in the direction of the cook-tent, where our own supply of lunch was soon exhausted. Frank and Ed, however, looked so longingly at the cook's handiwork, that we were presented with an apple pie.

From this point on the Sky Line Trail, looking almost due west across the lava flow, we could see Mt. Washington, with its helmet-like pinnacle. It did not seem possible to the tenderfoot that the party could hope to reach its distant base by nightfall.

Finally the way was cleared and we took the down grade to Four Mile Spring, about seven miles from Sisters town. We parked our car at the Spring and inquired our way from a camper. After receiving the usual wrong directions we started out, but used our own judgment in time to save many miles of useless walking. This portion of our explorations led through the wonderful open pine woods for which Central Oregon is justly famous. Our first objective was to strike a small lake, without a name, indicated on the map about midway to the base of the mountain. Delayed somewhat by false trails, we reached the lake late in the afternoon, and rested for a time in anticipation of a strenuous three or four mile scramble toward Mt. Washington, over lava rock and through thickets and fallen timber.

At no time after entering the woods were we able to see the mountain, and upon leaving the lake about an hour's time was lost by veering too far to the northward before righting our course. For four miles—it seemed a dozen—the underfooting was an ancient lava bed, and much brush and timber. This part of the trip was gruelling to untried muscles. Finally, hot and parched, we stumbled onto a clear mountain stream, and after bathing our now blistered feet, followed this watercourse toward Mt. Washington, which began to tower ahead, outlined in the setting sun. The slope became more and more precipitous with each mile, and just at sundown we reached the end of the valley, and there before us was Mt. Washington—the unconquered.

Camp that evening was made directly to the leeward of a boulder the size of a house (note snapshot). Out of the packs appeared tea, bacon and dehydrated apples, all quickly prepared over a fire fanned by the heavy wind. Nine o'clock found the outlaws, meekly followed

by a trusting tenderfoot, preparing to pass the night under some scanty, wind-beaten trees. Many were the seeming footfalls of wild beasts that we heard that night, as moonlit a night as ever stirred the soul of a Mazama. Mt. Washington, with its forbidding tower of black rock, looked foreboding and far less promising than it did when we first surveyed it from Prouty's Memorial, that first day at Camp Montague.

Six o'clock the next morning found us toiling up the northeast base of the mountain. We crossed a ridge just under and above a huge segment, peculiarly marked with gnarled and twisted strata, which seemed to have been hurled off from the mountain itself. Here we encountered snow for a short distance, and then followed a rocky chimney, which Redman said resembled "Shuksan," whatever and wherever that is. The way ahead, while tough going, did not look insurmountable. The pinnacle itself appeared to offer plenty of refuges for finger holds and hobnails, and an occasional scrub tree gave promise of substantial aid.

Reaching the main shoulder of the mountain above which the peak towers probably five hundred feet, we surveyed our position. To the west lay Big Lake and the Santiam Pass. On the north, Three Fingered Jack cut the skyline with its spear-like peak and beyond was Mt. Jefferson, wearing a gay wreath of cloud. On around the panorama came Black Butte, the Central Oregon plains, the Three Sisters, and the intervening lava fields.

If the reader is familiar with the profile of Mt. Washington, looking from the east or west, we had now reached the base of the pinnacle where it rises from the north shoulder, and a treacherous barrier of rock from fifty to a hundred feet in height stood between us and what appeared to be a possible route to the summit. From a distance this face of the peak appeared negotiable, but closer inspection revealed a loose rock formation, ready to fall at the slightest pressure, which, indeed, is the character of the entire mountain. This point seems to be the highest reached by any climber, since we found a tin can with the names of two Redmond men who had climbed to the same spot the year before.

Peterson and Penland decided to follow a shelf of rock to the left of the pinnacle, while Redman and I attempted another promising chimney. Both attempts proved unsuccessful, one very nearly disastrous.

Our two companions had worked around to the left out of sight on a side of the peak which dropped the farthest and quickest, when all at once there came a rumble and crash, and a five-hundred pound boulder plunged past us down the chimney, taking several tons of rock with it. Peterson and Penland did not accompany the

procession, although we learned a few moments later that the rock had been dislodged when Peterson, with a lift from Penland, was attempting to wriggle up over a ledge. Both had dodged in the right second to save certain injury.

Provided that this barrier can be surmounted, it is the opinion of the "outlaws" that the northeast side of Mt. Washington is the best point from which to make a future attempt to answer the mountain's challenge, but for that day we had had enough and proceeded on around the base of the peak, testing every plausible route of ascent. It was rough going before we had made up lost elevation and gained the south "hump" of the mountain, from which advantage Penland still holds that he could have climbed the five hundred upright feet of rock had there not been three pairs of cold feet with him.

Reluctantly, but swearing in real language to return at some future date for another try, the "restless four" descended to their bivouac camp, and at one o'clock started on the long trip back to Camp Montague. The interesting speculation on the return was whether or not we would be able to find again the small lake midway to Four Mile Spring. The answer was as pretty a bit of woodmanship by Peterson as one could wish for. With no trail or landmarks to follow, and relying more on judgment than on his compass, Peterson led the way, and after taking note of fresh deer tracks and the tree marks of a winter trapper, made a dead center shot on the lake. Later, however, he reduced his percentage by straying from the trail near the Spring, but not for long.

By this time the sky had become blackened with thunderclouds and a few drops of rain predicted a mountain storm. We lost no time after reaching the car to bounce on our way toward Frog Camp. It was pitch dark when we swung into line up the last trail, and a flashlight which the tenderfoot had smuggled into his pack was all that saved Peterson from admitting that "he was afraid to go home in the dark."

Ten o'clock found us at the Mazama camp-fire session telling all about the trip, something we have been doing ever since.

Photographs by R. W. Osborn and E. F. Peterson.

Upper—Two views of Mt. Washington, looking west from bivouac camp. Lower left—The pinnacle from highest point reached by climbers. Lower right—Where the "restless four" got "cold feet."

"The Black Beast of the Cascades." The North Sister from source of Collier Glacier.

Photograph by Boyzhuk.

A Chronicle *of the* North Sister

By John A. Lee

Of the several peaks that make up the Three Sisters group, the North Sister is of special interest, mainly because of its severe, almost forbidding aspect, and the difficulty of its ascent. In point of altitude it scarcely exceeds the Middle Sister, and falls short of the South Sister by almost three hundred feet. In bulk, it would suffer still more in comparison. Indeed, it is little more than a skeleton, with scarcely more of friendliness and charm than is possessed by any other skeleton. Its contour is nowhere smooth or rounded, but consists entirely of planes and angles. Its surface, except well down near the base, bears scant vegetation of any kind and is utterly devoid of trees.

Imagine some four uprearing, knife-like aretes, or ridges, converging to a common center, this center surmounted by two well-defined pinnacles, the more southerly pinnacle somewhat the higher, more elongated, and with a saddle-like top, the whole mass composed of black and rapidly disintegrating lava, each face either a precipice or so steep, for the most part, that neither snow nor talus can find lodgment on it, with the ice stream of Collier Glacier sweeping about its base on the south and west, and you have a fair mental picture of the North Sister. The ridges, too, in addition to being knife-like in character, have not a regular and even crest, but are serrate, at intervals deeply so, somewhat as a knife would be after being hacked upon a nail. In short, the North Sister may well be styled the *bete noire*, truly the black beast, of the Cascades. Yet, withal, and even because of the challenge that its sinister aspect hurls forth, it has a fascination, even though not a charm, that has caused a few venturesome spirits to accept the challenge and to essay to place iron-shod foot upon its crest. Some (twenty-one in all) have returned with victory perched upon their banners. Others have been obliged to confess defeat.

Upon the geology of the North Sister the writer will not attempt to dwell. Indeed, he would not presume to do so when it has been so well, and so much more authoritatively, covered by the articles of Ira A. Williams and Warren D. Smith, which appeared in the *Mazama* of 1916. However, one interesting conclusion drawn by these scholarly commentators will bear repetition. They agree that the North Sister is probably now scarcely more than a remnant of its former self; that through the tearing down process of disintegration and erosion, which, to a greater or less extent is taking place among all our mountains, its once loftier and more massive and rounded bulk has now been reduced,

literally, to a skeleton. This process is still actively going on, though now not so much through erosion as from disintegration and gravity sloughing, for, as before observed, the mountain is now so steep that little of snow or ice clings to its sides. This disintegrating and sloughing process is indeed very marked. At intervals of every few moments rocks will break loose from their bed and go hurtling and ricocheting down the slope, perhaps starting a whole avalanche of rocks in their wake, and all with a crash and a roar that is just a wee bit disconcerting to even the hardiest climber. In imagination he pictures himself following the course of the catapulting rocks and wondering if he would be as resilient as they—would bound as high. If, perchance, at the time he is in a place where his footing is none too secure, he wonders, too, if the concussion that he feels, or at least imagines that he feels, will not dislodge that part of the mountain upon which he stands and cause it to crumble away beneath his feet. One scarcely needs to be a geologist to appreciate the great destructive forces of nature as exemplified in the North Sister.

In treating of the North Sister from the standpoint of the mountain climber, the writer likewise has not a virgin field. In the issues of *Mazama* of 1912 and 1916, all the ascents of the mountain made, respectively, theretofore (except one) are well recounted. However, in addition to giving some account of the ascents of this peak made during this past summer's outing of the club, the writer deems it fitting to bring the chronicle up to date by including a brief resume of the earlier climbs. Some reference to the climbing conditions of the mountain found this year as compared with those of the previous years of its ascent may also be of interest, as also some observations upon the ascent of this mountain as compared with that of other peaks of the Cascades.

The first well authenticated climb of the North Sister was made during the course of the Mazama outing of 1910, by the late H. H. Prouty, who served two terms as president of the club, and whose ashes repose beneath a tablet, appropriately inscribed, which is embedded in the face of Obsidian Cliff, opposite the 1910 Mazama camp. An account by the writer of the expedition which there placed the remains of this redoubtable mountaineer, one of the most daring and successful climbers of the club's membership of all time, appears in the *Mazama* of 1917.

Mr. Will G. Steel, well known to all as one of the founders of the Mazama club, is authority for the statement that Dr. E. O. Smith, now deceased, together with Jerry Driggs, claimed to have ascended the "Three Sisters" in the year 1860. Since, however, as observed by

Mr. Steel, it does not appear that Dr. Smith designated the North Sister specifically in his claim, and since no record of his climb of this peak has ever been found upon its summit, credit for the climb can hardly be accorded him in the absence of more definite proof.

In 1903, the Mazamas planned to hold their official outing at the Three Sisters, but owing to difficulties in securing transportation, the outing miscarried. Not to be thwarted, six of the Club's members, L. L. Hawkins, M. W. Gorman, Leslie M. Scott, Edmund P. Sheldon, R. L. Glisan and E. H. Loomis, arranged a trip of their own. Being in lieu of the regular outing, and having as its personnel thoroughly representative Mazamas, this expedition may be said to have been at least semi-official in character. The party spent two weeks or more in the Three Sisters region and did much exploring. As a part of this exploration, Glisan and Loomis reached the summit of the north pinnacle of the North Sister (now known as Glisan Pinnacle), not realizing until they had attained their goal that the other pinnacle was higher. The hour was too late for them to attempt the ascent of the higher pinnacle and, as it was, they came near having to spend the night upon the mountain. Mr. Glisan's account of their descent, during the dusk of evening, of one of the steep, almost precipitous, chimneys leading down to Collier Glacier is a thrilling one.

Mr. Prouty, then, must be credited with having made the first ascent of the south pinnacle, the real summit of the mountain, which pinnacle now bears his name. He found no evidence whatsoever that anyone had been there before him. As a speed and endurance feat his climb is the more remarkable, in that he had already, on the same day, made the ascent of the Middle Sister, and he was obliged, naturally, to do considerable exploring of the North Sister before hitting upon the route that brought success. The route that he discovered is the one that so far as is known, has been followed in all subsequent successful efforts to climb the mountain. It is perhaps too much to say that this is the only route possible, but in the writer's judgment, as presently will be explained more fully, it is the only route that may be considered safely feasible. This route, in brief, is along the south ridge which extends up from the pass between the North and Middle Sisters, to the base of the main, or Prouty, pinnacle, thence westerly and northerly, encircling the base of Prouty Pinnacle, to a chimney or chute which leads up from the west to the saddle midway between the north and south prongs of Prouty Pinnacle, thence north along the saddle to the north prong, which is the very summit of the mountain.

Prouty's climb was made on August 9. The next day C. W. Whittlesey and Francis Benefiel attempted the ascent. They reached and

half encircled the base of Prouty Pinnacle, but failed to discover a feasible way to the summit, and returned baffled and a bit chagrined, though confessing that they had had the "climb of their lives."

A few days following Prouty's memorable first climb, he led to the summit a party of six, in addition to himself, three men and three women, namely: Edgar E. Coursen, J. W. Benefiel, H. H. Riddell, Geraldine Coursen, Louise Almy and Jeanne M. Stewart. In the 1912 *Mazama*, H. H. Riddell, in the course of his write-up of the 1910 outing, gives a succinct, though vivid, account of this climb. Reference is made to the fact that the rope was brought into use at all difficult places, that a very steep and icy snow field had to be traversed before the bottom of the chute was reached, and that a Mazama registration box was left on the summit.

Mr. Edgar E. Coursen had contributed to the *Oregonian* of August 27, 1910, a somewhat more extended account of this climb, and in the course of the article he makes allusion to the fact that Prouty, on his first climb, was on Glisan Pinnacle as well as on the higher pinnacle which bears his name. It appears that Prouty first reached the summit of Glisan Pinnacle, finding there the record left by Glisan and Loomis in 1903; also the name of one other person, which, on account of exposure to the weather, could not be deciphered. Noting that he had not attained the very highest point, he retraced his steps as far as the chute, and by that route reached the summit. Mr. Coursen also makes mention in this article of a climb by himself, alone, on August 17 of that year, to the summit of Glisan Pinnacle by way of the northwest arete. Upon reaching this summit he found that three others, in the brief interval since Prouty had been there, had signed their names to the record left by Glisan and Loomis. These were "Messrs. Hicks, Mohler and Melendy."

In the Mazama box left by the Prouty party in 1910 there is a record to the effect that one L. H. Weir, on August 29, 1914, reached the summit after having, on the same day, made the ascent of the Middle Sister, thus duplicating the achievement of Mr. Prouty, except in the one respect of not having made a first ascent. Mr. Weir's account is very brief, containing, in fact, no more of information than as stated above. The writer has made inquiry as to the identity of Mr. Weir, but has learned no more than that he is reported to have been a member of the faculty of some eastern college.

In 1916, the Mazamas, for the second time, held their official outing at the Three Sisters, recounted in the *Mazama* of that year. During the course of this outing Mr. Prouty sought to lead a party of thirteen, six men and seven women, to the summit of the North

Photographs by R. L. Glisan.

Upper—Loomis on Glisan Pinnacle, North Sister, 1903. South Sister in the distance. Lower left—Lee and Hathaway on spur of North Sister in 1916. Lower right—1916 climbers at base of Prouty pinnacle.

Photographs by Boychuk

Upper—North Sister from near 1916 Camp.
Lower—North Sister; Little Brother in foreground.

Sister. All succeeded in reaching the base of Prouty Pinnacle, but four only, H. H. Prouty, E. F. Peterson, A. S. Peterson and Thomas R. Jones, attained the summit. These four, having gone ahead as scouts, reported, upon their return to the main party, that the remainder of the climb was, in the then condition of the mountain, too difficult for so large a party to attempt; that not only was the icy steep at the base of the pinnacle, across which they had had to cut steps, fraught with danger, but that since 1910 there had been so much rock sloughing off in the chute, that this last part of the climb was extremely hazardous, both because of insecure footing and the danger of falling rocks. It was also Mr. Prouty's opinion that, because of these changes taking place in and about the chute, in a few years the mountain could not be climbed at all.

In August, 1916, C. H. Sholes, M. W. Gorman, R. L. Glisan and the writer made a jaunt by automobile through Central Oregon, spending a few days in the Mazama camp. During our brief stay Glisan, Sholes, Guy Thatcher and the writer set out one day to do some exploring on the North Sister, thinking, if all went well, that we might attempt to scale Prouty Pinnacle from the north. First we visited the Cinder Cone, which is near to the northwesterly base of the mountain, taking the accustomed route down the neve of Collier Glacier. We then ascended the long northwesterly arete, which leads up to the notch between the Glisan and Prouty pinnacles. After a rather tedious climb along the narrow crest of the ridge, surmounting some of the spire-like uplifts that we encountered, and skirting the base of others, we came to an exceedingly steep chute leading down toward Collier Glacier, just beyond which was the notch before referred to.

Mr. Sholes balked and refused to go farther, remarking with some little heat that he didn't propose to be a party to any more "crazy stunts," and that his "neck was of more value than all the pinnacles on the mountain." Not caring to debate the matter with him, thinking possibly that he might have the better of the argument, but still not wanting to turn back, we left him and went on, cutting steps in the compacted talus and proceeding carefully in crossing the chute. A bit more of rather ticklish work in surmounting an ice cornice at the foot, and we were, in the notch. The climb out of the notch up to the summit of Glisan Pinnacle, where Glisan had stood thirteen years before, was a simple matter. It became quickly apparent, however, that to reach the summit of Prouty Pinnacle from this approach was not so simple, and it plainly was not possible, either, in the then condition of the mountain, to swing around the base of the pinnacle to the chute used by the Prouty parties in reaching the summit. After careful recon-

noitering we concluded that the only place of attack that held out any promise of success was the northeasterly angle of the pinnacle, just above the easterly brink of a snow bank that partly filled the notch, at which point the mountain drops off sheer (overhangs in fact) for several hundred feet.

Although the day was already far spent, the writer decided that he would make a try at this route. The face of the pinnacle was almost perpendicular, but fairly good hand and foot holds offered for a distance, and he succeeded in reaching a point that he estimated to be only about thirty feet below another point which, if reached and safely passed, would enable him without much further difficulty to reach the top itself. He perceived, however, that, at this point, which was a narrow ledge projecting out from the summit proper, the surface rock was disintegrated columnar basalt, piled criss-cross, much as small stovewood would be if thrown at random, and appearing to need only a touch to start the whole mass tumbling off the mountain. Concluding that in this situation the philosophy of Sholes was sound beyond question, in which conclusion his two companions below were voicing rather vociferous concurrence, he reluctantly descended and the three rejoining Sholes, hurriedly made their way down the mountain. With a ladder fifteen feet or so in length, it would have been possible then (perhaps not so now) to gain the summit of Prouty Pinnacle from this northeasterly approach; for the ladder would have enabled us to set foot upon a ledge just beyond our reach in the overhanging east face of the pinnacle, from which ledge a chute, steep, 'tis true, but climbable, extends to the summit.

This brings our chronicle down to the Mazama outing of 1922. That same challenge which aroused the do-or-die spirit in the more daring climbers of the two previous outings stirred like feelings in a goodly number in this year's camp. These feelings were perhaps rendered the more intense by certain vague rumors spread about the camp that the mountain had so changed during the seven years since the last reported ascent that it now could not be climbed. The true foundation for all such rumors, doubtless, was the prophecy made by Prouty following the 1916 climb, though reports were current of certain attempted ascents that had proved unsuccessful and even of rewards being offered for any one who might succeed.

Two different parties accepted the challenge, each consisting of five persons, ten in all, and both parties were entirely successful.

The first party consisted of John Penland, as leader, R. W. Osborn, John R. Byers, Lee Benedict and Arthur Emmerich. John Scott, Elmer Maxey, Frank M. Redman, W. K. Newell and the writer were

the members of the other party. As each of these climbs was, in the main, a duplication of the other, each following almost precisely the same route, the writer will not attempt to give a detailed account of each, but will limit his narrative to the one in which he participated and hence is best able to recount. The other would be equally entitled to this preference, perhaps the more entitled, since it was the first ascent of the peak this year, and, indeed, for the entire period since 1916. There may be mentioned one rather marked difference in the conditions under which the two parties climbed. Just prior to the ascent by the Penland party there had been a light fall of snow upon the mountain, which had partly melted and again become frozen. This had disappeared entirely when the second party climbed. This condition had in it elements both of advantage and disadvantage. It minimized the danger of dislodging rocks but, on the other hand, rendered the footing in places more precarious.

The second party got away to a fairly early start, 4:30 A. M., which was before the morning meal in camp. At Prouty Creek we halted, built a fire and partook of a substantial breakfast, so as to be well fortified for the tense work which we knew lay ahead. Breakfast over, we proceeded on our way, steering straight for Collier Glacier, which, upon being reached, we crossed to a point well over near the base of the North Sister. We then followed up and along the neve of the glacier until the pass between the North and Middle Sisters was reached, keeping close to the northerly marge of the glacier in order to avoid the many crevasses lying across its middle current. From this pass the ascent proper of the mountain was to start.

At this point of the narrative it becomes necessary to digress somewhat in order to explain how it happened that our party became divided, with the result that we made the remainder of the ascent and the descent as well, as two separate groups. Scott may be said to have been the mainspring, the motive force, behind this second expedition. Except for him the party probably would not have started. In August, 1921, he and Randolph Carroll had attempted to duplicate Prouty's feat of climbing the Middle and North Sisters in one day. Having attained the summit of the Middle Sister they ascended the North Sister as far as the ice field below the chute of Prouty Pinnacle. Here they turned back, since having no ice axe, and being poorly shod for ice work, they deemed it imprudent to go further. A wrenched tendon had prevented Scott's joining the Penland party. His eagerness now to realize the goal of his ambition amounted to a passion. He was up before daybreak routing the other members of the party out of bed, and from the start was like a greyhound in leash. So that as Newell,

Redman and the writer were proceeding leisurely up the glacier, feeling that there was ample time for the undertaking and conserving their strength for the more exacting portions of the climb, Scott and Maxey gradually forged ahead. By the time they had left the glacier and started up the south arete they were out of call, and very soon were out of sight. Since we knew both to be experienced climbers, this maneuver on their part, though unexpected, gave us no special concern, except for the one fact that we carried the only rope. Each group possessed an ice axe. Happily there was no mishap by either group, and no near approach to one.

The climb on the arete for a distance presented no great difficulty, though rendered a bit tedious by loose ash and scoria. Soon, however, entirely different conditions were encountered. The crest narrowed and became much broken, ash and scoria giving place to basalt. One jagged pillar succeeded another, each so high and steep that it could not be surmounted and the base of each occupying the full width of the arete. Each had to be skirted. To do this on the west was impossible, as on this side the arete was no longer a slope, but a precipice. To pass them on the east was the only way open and this was not always a simple matter. Oftentimes the base of the pillar would start, not from the crest but from a point some distance down on the slope of the arete, so that in order to round the pillar we would be obliged to descend this distance and then climb back again; and so very steep was the slope and so insecure the footing, and the hand-holds in the face of the pillar as well, that this proved one of the most taxing portions of the climb. In many places one did not dare to set foot upon a projecting rock or to grasp it with his hand without testing it most thoroughly to determine if it would support his weight. Repeatedly, rocks that bore the appearance of being perfectly secure, would, upon slight pressure, go hurtling down the slope.

Upon reaching the base of Prouty Pinnacle the going was easy for a distance. A projecting shoulder, talus covered, not wide but wide enough to afford good footing, leads around the base of the pinnacle to a point where the westerly face of the pinnacle becomes visible to the climber. In the interval between this point and the bottom of the chute lay the hanging ice field which figured conspicuously in all the climbs of former years. This year only a remnant of the ice-field remained—just a narrow fringe of ice clinging near to the base of the pinnacle. The ice was melted away on the upper side, thus leaving a narrow space between the field and the rock wall. The Penland party made use of this cornice-like fringe of ice to cross to the base of the chute. The second group of our party used it also for

Photographs by E. F. Peterson.

Left—Prouty Pinnacle on North Sister, in 1916. Glisan Pinnacle on extreme right. The 1922 climbers circled to the right of spur in foreground. Right—Prouty on summit, 1916. Taken from top of chimney.

Photographs by R. L. Glisan, E. F. Peterson and Arthur Emmerich.

Left—1916 climbers on north ridge of North Sister. Upper right—View of North Sister from the east side, 1916. Lower right—1922 climbers entering chimney of Prouty Pinnacle.

a part of the distance. But so little of it remained on the day of our climb that it proved of slight service. and of necessity we, for the greater distance, and through choice Scott and Maxey entirely, negotiated this interval by fashioning steps (partly by kicking them and partly by means of the ice axe) in such talus as clung to the slope. Progress here was slow, for so very steep is this slope, ending in a series of sheer drops where the rock outcrops, that no climber could recover himself if his footing should give way. Our group of three made use of the rope across this slope, as we had done also in rounding the series of rock pillars on the arete. It was here that Byers of the Penland party was saved from serious mishap by aid of the rope, and it was here also that the rope saved Coursen, in 1910, from being carried down the mountain when, in dropping out of line to recover his daughter's alpenstock, he started an avalanche of talus.

As our group of three neared the base of the chute we met Scott and Maxey returning. They reported that they had been to the summit. After being furnished by them such information as they thought might be to our advantage in ascending the pinnacle, we resumed the climb and they continued down the mountain.

Upon entering the chute the remainder of the route was plain. Its patent feasibility was indeed rather a surprise, considering the impressions of its hazards we had formed from reports. The chute is a sort of box canyon cut into the west face of the pinnacle. It is perhaps a hundred feet in depth and twenty feet in width at the floor. The floor is comparatively level laterally, and is of only moderate grade longitudinally. For the most part it was covered with soft snow, affording excellent footing. Only the right hand, or south, wall of the chute inclines sufficiently to permit of ascent. Forty feet or so of this is very steep, almost perpendicular, but it has in it enough of rock projections, some firm, others not so, as to enable a careful climber to scale it without exceeding difficulty or risk. Once up this forty feet of wall the way to the saddle is easy. Scarcely less so is the way from the saddle to the elevations at either end, of which the one to the north, the higher, is the extreme summit of the mountain. This may be referred to as the saddle's horn, while the other would be its cantle. At the very top, under a little cairn of stones, reposes the Mazama box. The saddle, from horn to cantle, is extremely narrow, not wide enough for two men to walk abreast, and drops off sheer toward the east. Its length is such, however, that perhaps as many as a hundred people might stand in line upon it.

The weather was warm and pleasant, with little wind, and we spent an hour or more upon the summit—eating our lunch, enjoying

the view, reading the inscriptions in the Mazama box, among which were those left by Scott and Maxey, and leaving our own record there. The writer took special pains to note the comparative heights of Prouty Pinnacle, upon which we stood, and Glisan Pinnacle to the north. He estimated Prouty Pinnacle to be the higher by about forty feet. He also was much interested in inspecting from above the route by which he had attempted to scale this summit in 1916. A few shivers ran up and down his spinal column when he noted how extremely precarious would have been the last thirty feet of the climb had he persisted in the attempt. Had he persisted, possibly this account never would have been written.

There was one other topographical feature of the mountain of which the writer took special note. That was the notch between the Glisan and Prouty pinnacles. That Prouty, in his first ascent of 1910, was on both of these pinnacles seems well established. Thus twice he must have negotiated the interval between them, a feat which our party of 1916 considered then to be impossible. To have attempted such a feat this year would clearly have been the height of folly. A great change then must have taken place in the conformation of the notch in the interval between 1910 and 1916. Glisan is strongly of this opinion, basing it upon comparative impressions as between 1903 and 1916. This change may have occurred at the same time as the other changes noted by Mr. Prouty in 1916, to which reference has been made. Neither Prouty nor any other member of his party attemped this crossing in 1916. "We took a look at it and concluded that it could not be done," was the way that E. F. Peterson put it in a recent conversation; and any mountaineering feat that "Ed Pete" will not attempt has to be pretty bad.

In this same conversation "Ed Pete" cast another interesting sidelight upon their climb of 1916 that tends the more to emphasize the very great extent of the changes that had been wrought in and about the chute since the climbs of 1910. As they reached the bottom of the chute Prouty appeared nonplussed. Starting to ascend the pinnacle by the route which he remembered to have used before, he was obliged to retrace his steps, with the result that Peterson, who was then part way up the south wall of the chute, was first upon the summit.

Our descent of the mountain was without incident except that we were caught in a dense fog on Collier Glacier. From the summit we had perceived this fog enveloping all the low country to the west, but scarcely expected that it would rise so high upon the mountain as to impede our return. A friendly trail upon the glacier, homeward bound, saved us much time in threading our way among the crevasses, and a

pocket compass also came in good stead. Camp was reached before nightfall.

Any effort to compare the ascent of the North Sister with that of some others of our well-known mountains, with Rainier and Baker, for example, would be an attempt to compare things utterly dissimilar. The climb of the North Sister is rock work almost entirely; while on the other peaks mentioned, crevasses, seracs, bergschrunds and, under some conditions, icy slopes are the chief obstacles to be overcome. In the consumption of foot-pounds of energy the climb of the North Sister is scarcely more exacting than the ascent of any other of our major peaks. But in point of treacherousness, in the requirement of continued tension and nervous strain, the North Sister furnished the writer the most difficult climb in his experience.

In Memoriam

ENOS A. MILLS

All mountain lovers will be shocked to hear of the death of Enos A. Mills, who recently passed beyond on the last long trail.

Mr. Mills was born in 1870 and early in life went to the Rocky Mountains, where he spent most of his life. He established a cabin on Long's Peak in Colorado in 1886. He explored the Rockies in Colorado, traveling alone without firearms—especially interested in wild flowers, birds, animals and scenery, and has written quite a number of books, most of them dealing with the Rockies and the wild life found there.

He acted as guide on Long's Peak for a number of years and made a large number of ascents. He preached the doctrine of hunting with a camera rather than a rifle.

It is a source of regret that we no longer have him as an advocate for the out-of-doors.

R. L. Glisan

Map Making *in the* National Forests

By LAGE WERNSTEDT
Forest Service, U. S. Department of Agriculture

When a person gets mixed up in the hills, as sometimes happens, the old reliable alibis are the old compass or the map that was wrong, and to be sure, the maps of the Pacific Coast Forests sometimes are in error, and in many instances may well cause the weary traveler to pause for meditation. Good maps, and also good judgment in using a map that is not so good, are two desirable things for the hiker in the hills to possess.

A map may be a very fair one for the purpose of general travel, although details are not shown either with completeness or with accuracy. Many features that exist may not be shown and those that are shown are frequently out of place. Nevertheless, the general character of the country, and the general location of peaks, creeks, meadows and trails, as a rule, are good enough and very useful for general travel. In the nature of things they could often not be shown with exactness, as the map may be based in part on personal knowledge of the country rather than being the result of surveys.

Most of the maps of the National Forests, though not all in this District are, of necessity, of this character, or general maps built up from surveys of the General Land Office, which in themselves are accurate only on section lines, or are based on U. S. Geological Survey data, county engineer's maps, and various other sources. Very large areas of entirely unsurveyed country exist in many of the Forests, and maps of these areas are usually compiled from information obtained from those who are in possession of the best personal knowledge of the country. Such as they are, these maps represent a complete and laborious collection of all map data available and are creditable maps considering the meager and scattered sources of accurate information on which they are based.

The need of better maps, however, is constantly felt in connection with various administrative needs, the demarkation of grazing allotments or other boundaries, the mapping of the timber and forage types, road and trail location and the like, and especially in connection with the accurate location of fires discovered from the lookouts. This latter need is imperative. A lookout system and fire-finding instruments without any maps would be of but little value in correctly locating fires, and are effective in proportion to the excellence of available maps.

1. Looking Northeast from The Wife. Middle Sister to left, South Sister to right.

Photographs by Lage Wernstedt.

2. Looking East from The Husband. Middle Sister to left, South Sister to right, and Rock Mesa in right foreground.

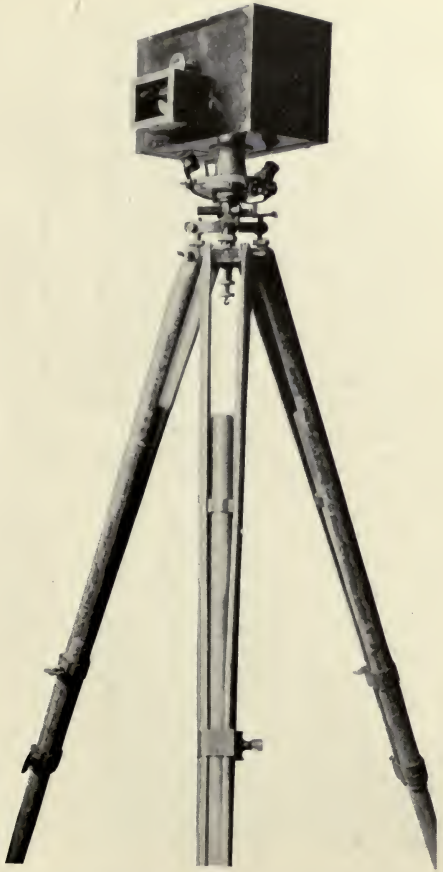


Photo Topographic Outfit. Camera mounted on interchangeable tripod. Sun Shade, Lens mounted eccentric. Camera mounted on same leveling base as transit.

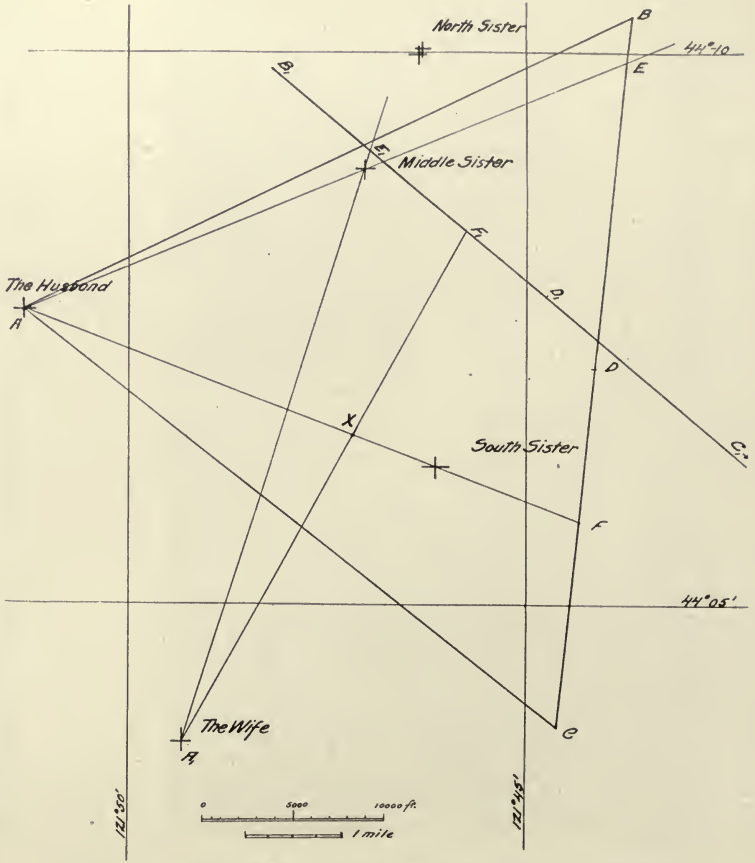


Diagram showing method of locating points by intersection from photographs.

A compiled map will be distorted in the process of building it up and angles taken with a fire finder between distant points will not check with the same angles on the map.

Hence, arises the necessity of a general triangulation which will accurately determine points distributed over the entire area and fix the true interrelation between different portions of the map. From these triangulation points, called control points, the rest of the country may be mapped in detail, and everything will fit true.

The Forest Service in this District has recently begun to cover systematically the National Forests in this manner, with a triangulation scheme which involves the accurate determination of the position of every salient point in the Forests, and in addition, the position of lakes, meadows, creeks, etc., insofar as these are visible from the stations occupied. Connection surveys will be made to points on the General Land Office surveys in order to adjust these also to the general triangulation scheme.

With the limited funds available for this purpose, the making of a complete topographic map will have to await the coming of the U. S. Geological Survey in the course of its regular work.

Nevertheless, the maps thus gotten out will be a great improvement over the present maps, and will suffice for immediate needs. They will, incidentally, also be more useful to visitors to the Forests.

In the making of any maps the location of a number of points, such as peaks and cliffs, shoulders, saddles, creek junctions, meadows and lakes, and other salient points, are determined by instruments. The remainder of the map features are sketched in in their relation to these points which furnish the skeleton frame for the map. There are several methods of locating such points—by plane table and alidade, by transit observations, or by the aid of photography. This latter method was the one used by the party that had the pleasure of meeting the Mazamas on their outing last summer.

This method offers some advantages for this class of map making as the field work is rapid, and a permanent record of every portion of the forest is obtained, which is valuable to the Forest Service for various purposes. Space permits only the briefest description of how the work is done. The general procedure of map making is the same whatever method is used.

A number of primary triangulation points fifteen to twenty miles apart, already established by the U. S. Coast and Geodetic Survey, or by the U. S. Geological Survey, are used as the base. These and others established as the work progresses, are occupied, and the positions of the additional ones are determined by measuring horizontal angles from,

or to, the original stations with a transit. Elevations are similarly obtained by measuring vertical angles. From all stations pictures are taken with a surveying camera, which pictures form a complete panorama of the country visible from each point. By means of the photographs direction lines to all desired points from any station may later be drawn in the office. The point of intersection of such lines fixes the location of the point sought.

The nature of a picture taken with an anastigmatic lens is such that if you look at the picture from a point directly in front of it, and at a distance from the picture equal to the distance between the film and the lens, then all angles to any point on the picture, horizontal or vertical, are identical with the corresponding actual angles in the field as they appear or are measured from the point where the picture was taken. All operations are based on this fact. You merely transfer the outdoors to the office and measure your angles graphically from the pictures the same as you would with an instrument, be it transit or alidade, with the landscape before you.

Briefly, the office work progresses as follows:

First, a "projection" is constructed on the desired scale, consisting of lines representing meridians and parallels for every five minutes of longitude and latitude covering the country to be mapped, often 50 or 75 miles square.

Second, the triangulation stations are platted on the projection. They will then be in the same relation to each other on the map as they are on the ground.

Third, desired salient points are picked out on the pictures. Any one point should be identified on at least three photographs taken from three different stations, the third line serving as a check to the intersection of the other two.

Fourth, the direction in which each picture is taken is determined and drawn on the map sheet. The picture is oriented, as it is called.

Fifth, the point on the picture, the location of which is to be determined, is transferred to the map sheet in such a way that its distance from the above direction line to the right or left is the same as on the picture, counting from a vertical line through the middle of the picture. Its distance along the direction line from the triangulation station is equal to the focal length of the lens. This will result in a point being marked on the map sheet. Then a line through this point and the triangulation station will pass through the actual location of the point desired on the map. Similarly, performing the same operation from one of two more triangulation points, one or two

more lines will be produced on the map all intersecting each other in one point, which is the location on the map of the point sought.

For an easier understanding of the above method we will refer to an actual case, as represented by the diagram. The diagram shows the projection and the platted positions of the primary triangulation stations North Sister, Middle Sister and South Sister, also the occupied stations The Husband and The Wife, positions determined by secondary triangulation. Photo No. 1 was taken approximately east from The Husband, and photo No. 2 approximately northeast from The Wife.

As a preliminary, make a right-angle triangle out of some suitable material, such as white celluloid, ABC (see diagram) where the base BC is equal to the width of the picture, and the perpendicular, AD is equal to the focal distance of the lens, as measured between the notches along the upper margin of the pictures. Draw the lines indicated on the photos. The one connecting the notches at the side margin represents the horizon line. The line perpendicular to it represents the direction in which the camera was pointed. F and F-1 is the same point marked on the two pictures, and the problem is to find its position on the map.

In order to orient a picture some triangulation point, or other reference point obtained from an adjoining photo, must be visible on it, as orientation is made from such a point as reference.

Draw a line on the map through A and the Middle Sister, the only triangulation point visible on the two photos. From D, on the BC edge of the triangle, mark distances DE and DF, as measured from photo No. 1. With the apex of the triangle at A, swing triangle around until E is on the line drawn through The Husband and the Middle Sister. The edge BE is now in exactly the same position on the map as the photo No. 1 is in reference to the country shown on it, and the camera was directed toward point D. Draw AF. The point sought is then located somewhere on it. As it happens this line passes through the triangulation point on the South Sister, and on the photo this line is represented by the vertical dotted line through F, which shows by the manner in which it intersects the summit, that the triangulation station, the highest point on the mountain, is not visible but lies further back.

The same operation is then performed with photo No. 2. Its oriented position is along line B-1 C-1 and the point sought lies along line A-1 F-1. As it also was on line AF the intersection at X marks its position on the map.

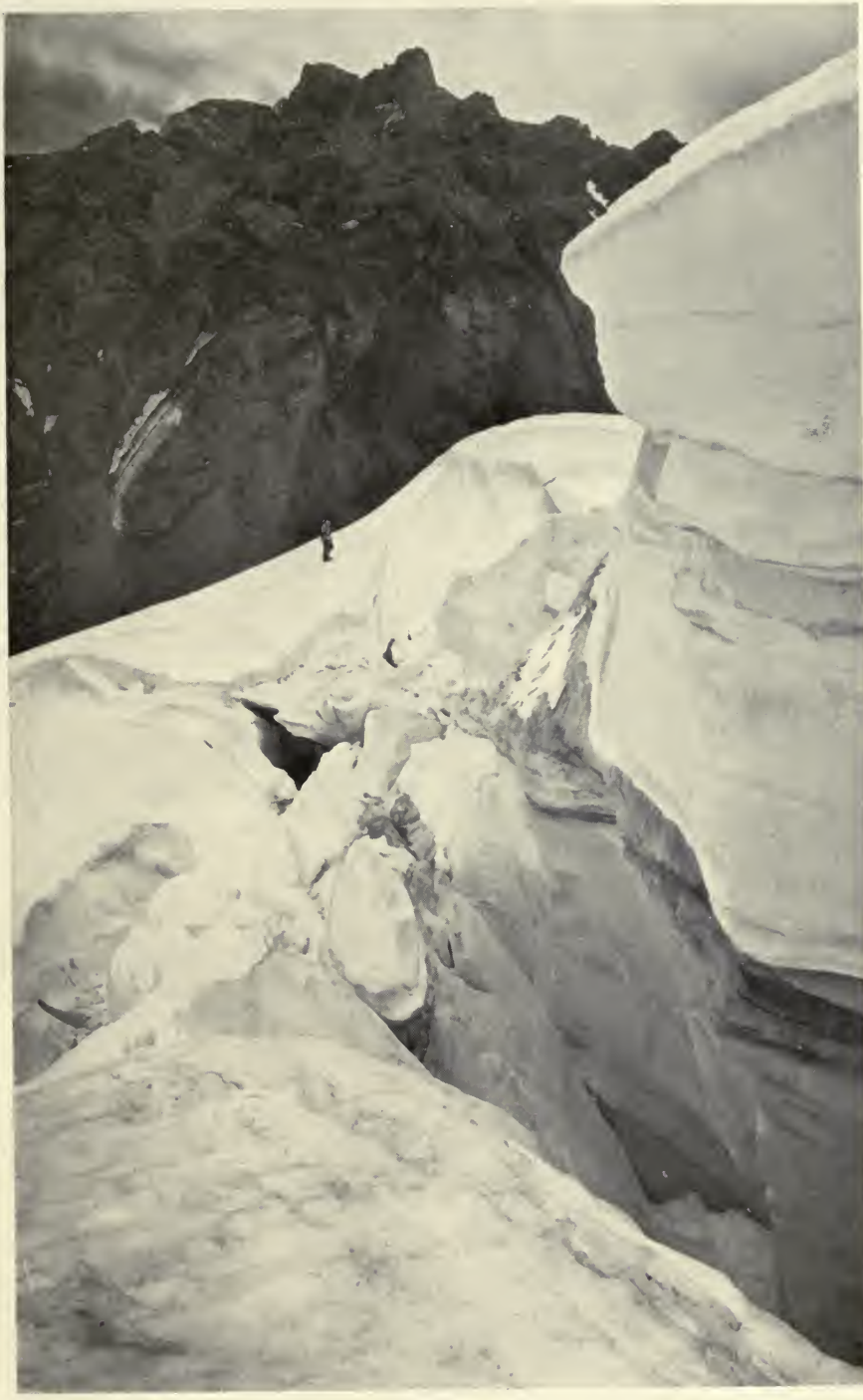
The next step is to determine the elevation of point F. Any point on the horizon line marked on the picture has the same elevation as

the station from which the picture was taken, plus a correction for curvature of the earth and refraction.

Measure closely the vertical distance from the horizon line to point F on photo No. 1, using a scale of feet made on the scale of the map. Then the elevation of X above Station A equals $AX \times \frac{e}{AF}$ all measured with the same scale. In this case e = 1,280 feet, AX = 19,500 feet, AF = 32,900 feet. From this equation is obtained the difference of elevation $\frac{1280 \times 19{,}500}{32{,}900} = 759$ feet. Add correction for curvature and refraction for the distance AX or 3¾ miles = 13 feet, obtained from tables. Hence, point F is approximately 772 feet higher than The Husband. the elevation of which is determined instrumentally from primary triangulation point by vertical angle.

In practice, where there are thousands of points to be determined, there are several refinements to be observed, and short cuts are used for handling and computing large numbers of locations in a rapid manner by bunching similar operations, but the procedure is, in principle, the same as that just explained, and with the aid of diagrams and other devices used, the work is entirely mechanical, or graphical. The data thus obtained may also be used in making a contour map as well from the pictures sketching the topographical forms the same as would be done in the field by other methods.

The instruments used in the field consist of a transit instrument, tripod and surveying camera mounted on leveling screws so that the photographic film can be made exactly perpendicular. To save weight cut films are used. The progress of the work is more or less dependent on weather conditions and the character of the country, but in general, it may be said that a party of two can cover one National Forest in a season. If connection surveys are made, tying General Land Office surveys to the triangulation system, then three men are needed and the cost will run around $3.00 per square mile for the completed map, such as described in the beginning of this article, as against about $25.00 for a complete topographic map, such as the U. S. Geological Survey is making.



Photograph by Boychuk.

Crevasse in Collier Glacier; North Sister in background.

Photographs by Boychuk.

Upper—Broken Top from saddle between North and Middle Sister
Lower—Snow Scenes.

*The Ascent of Popocatepetl

By Rodney L. Glisan

I had the good fortune last winter of taking an extensive trip through Mexico and Central America, one of my companions being a fellow Mazama, the other a member of the Sierra Club of California, of which I am also a member.

For the benefit of those who were not at Mt. Adams, I am requested to repeat my camp-fire talk of the ascent of Popocatepetl.

When we reached Mexico City, which boasts of a million inhabitants, we made use of letters of introduction from another Sierra acquaintance, and thus met an American who had climbed Popo, as they call it for short, and following his advice we sent word to Padro Velarde at Amecamecca that we were coming. It seemed a fitting occasion to make the ascent, as it was the 400th anniversary of the ascent of the same mountain by Cortez, when he led his victorious army into Mexico. Cortez made the ascent by commanding some of his followers to do it for him. The crater held a vast supply of sulphur, valuable for making gunpowder.

During its quiescent period large quantities of sulphur have been taken out of the crater.

Popo erupted six times in the sixteenth century, three times in the eighteenth, and once in the nineteenth.

We left Mexico City by train December 8, 1921. Leaving the plains we rose gradually into more luxuriant vegetation, arriving at Amecamecca, 36 miles distant, about 10 a. m. The town called Meca was destroyed by earthquake, and the rebuilt town was given the longer name.

A humble follower met us at the station and guided us to Velarde's house. He had everything ready but the provisions, courteously explaining that he did not know our requirements. We were taken to several small stores to select the necessary commissary, a task greatly simplified by the lack of nearly everything we asked for.

After an excellent lunch of chicken soup, rice, eggs, rolls and beer, we selected our riding animals, small but sturdy mules and ponies. Each of us had a native guide and a boy was added to take care of the animals. One pack animal took our equipment. Velarde wished us good speed. Dressed like a Spanish cavalier, he was the most impressive character we met on our journeys.

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*Published through the courtesy of the Seattle Mountaineers.

From the village square we looked up at Popocatepetl towering high above as if contemptuous of the feeble efforts of mere man to make its close acquaintance. As we left the village, clouds rolled up and hid our distant goal from view.

Our guides were equipped with pajama suits, wide straw hats, toe held sandals with blanket ponchos across the shoulders for night use.

Our trail led us up old water courses between heavily foliaged banks, dotted with dandelions, paint brush, foxgloves, heliotrope, lupine and many strange flowers; we crossed clear streams and passed small cornfields. The grade increased from 5 to 20 per cent; willows, wild crabapple, madronas, gave way for scattering pine, cedar and fir. Bird life was not much in evidence; juncos, chickadees and woodpeckers, an occasional vulture overhead. Butterflies, however, were plentiful, all sizes and colors. Burros met us hidden in a mass of corn stalks or dragging hewn timbers, taken from the forest above. About two o'clock we left the last cornfield and entered fairly heavy timber, and half an hour later passed into a dense forest of fir and pine close to rocky ramparts, offshoots from the base of Popo; at three we crossed our first high mountain stream—no danger of contamination here; its grassy banks fragrant with musk, snapdragon and yellow anemones. Several more streams crossed our path and purple lupine head-high brushed against us. We left the forest and crossed undulating slopes of dry, tall, tufted yellow grass, with pines in scattered groups. About five o'clock we came out on what we called the Ridge of Wonders. In front, across a small valley, towered the upper portion of Popocatepetl, partly cloud covered. Just back of us the setting sun cast an almost bloody crimson on the snow banks of Iztaccihuatl, a rival peak with more snow though slightly lower elevation. It was too late for effective photography, but not for the eye to record a permanent impression on the memory. I photographed both peaks with time exposures. Clouds the next day prevented other photographs. You all know how any mountain is woefully foreshortened by a close view with a kodak.

Dropping off the ridge we camped in a cluster of fair-sized pine close to a board cabin, housing two Mexican volcanic experts sent by the Government to study the volcano's activity. Popo had belched smoke the previous summer. A spring nearby gave us water and we soon had a roaring fire, much needed as the air grew colder as darkness came on. We were at the usual stopping place called Tlamacas, at an elevation of 12,788 feet. The guides removed their sandals and toasted their bare feet and some unleavened tortillas before the fire, taking occasional sips of pure cane alcohol. We put on all we possessed and sighed for more clothing. Anticipating this very climb, I had brought

with me all my Rainier winter apparel—my parka proving a life saver. We crept into a tent-shaped grass-thatched shelter. Each had a small cotton blanket. I rested, but did not perspire. My companions alternated between the fire and shelter, using me as a door mat, a keen wind offsetting the heat of the pine flames. The guides curled up close together in the back of the shelter. It was moonlight when we turned in, starlight when we arose at two a. m. The fire had dwindled to a few coals, the water frozen solid in the water cans. A meager breakfast was enjoyed by the guides and participated in by myself, with my companions as spectators, too cold to eat.

The guides led the way on foot and we followed on mules. We could not see the ground and let our mules follow the twinkling of the pajamas emerging from under the serapes of our leaders.

Leaving the pines we made our way up slopes of loose material among more solid rock. I dismounted frequently to accustom my lungs to the elevation, to keep from stiffening with the cold, and perhaps, lastly, out of sympathy for my protesting mule. At 5:30 we stopped at a cluster of rock at the base of the permanent snow or ice field, the spot called LaCruz, from small crosses stuck in the rock, the elevation 14,104 feet. Suddenly an intensely terrific blast overhead, followed by a long-sustained roar, caused us to look up. In the semi-darkness just preceding dawn we could see the outline of the volcano almost overhanging, and from its mighty throat rose a huge curling mass of smoke shooting skywards. The impression received from any sound is measured largely by realization of its source. The explosion seemed louder than the combined sound of many cannon. It seemed to permeate every fibre of one's being. The roar lasted perhaps half a minute—it seemed half an hour. Tense silence followed and then the noise of some downcoming objects. The guides uttered a cry of alarm and threw themselves in the shelter of the rock. We followed. The rock was well named—in the shelter of the cross we listened to rock whizzing by.

My friend interpreted muttered ejaculations of the guides to the effect that never had they seen or heard such doings before. My companions, affected by the elevation, weakened by the cold and lack of food, decided to go back. I tested the icy slope and found my hobs would not hold. We had been advised that hobs were not necessary, as one could get secure footing in the snow going up and could slide most of the way going down. Our adviser had made the ascent in September. The previous winter's snow had since disappeared. Seeing my embarrassment and consequent hesitation, my guide persuaded one of the other guides to lend me his ice creepers, a most ingenious set of thin steel straps hinged together and held by thongs passing through

steel rings on the side and criss-crossing the shoe. From the steel plates underneath projected solid, sharply-pointed steel spurs. My guide started upward, the others reluctantly turned back. It was one unending slope like St. Helens, an unbroken surface of ice or snow melted and then frozen so hard it required repeated thrusts of a heavy steel-pointed alpenstock before I dared trust the alpenstock to stand alone while taking photographs. There was not much to photograph, as we seemed to be between two cloud strata.

As the sun rose we looked out over a limitless sea of clouds, the top of one or two distant peaks appearing like small islands in an angry, cream-colored, wave-tossed ocean. It gave me a queer feeling to realize I was much higher than Rainier and practically alone, for my guide did not know one word of English. To make the realization more acute the volcano let out another sullen blast when I was half way up. I could see nothing but could hear rock hitting the slope not far away. We noticed fresh scoops in the icy slope, soup plate size, made by falling rock. My creepers, made for sandals, had an uncomfortable habit of working loose and the guide had to adjust them while I stood, as there was no place to rest on the slope. We kept a slow, steady gait and about 10 a. m. reached the rim, 17,794 feet above sea level, and peered down into a seething, angry hole, hissing, muttering, moaning. Sulphur smoke poured out of vents on the sides and the smoke was so dense below I could see nothing but violent agitation of what may have been smoke, but looked like some boiling material. The bottom of the crater was not the only thing that was agitated, consequently my impression may not be altogether accurate, but it looked about three hundred feet to the bottom and about three times that across. I shot my last films at my guide standing on the rim, and then sat down on the outer slope where heat had melted away all snow and ice. Just as I removed the exposed roll and was inserting the new and only roll I had with me, a blast from the crater behind me made me jump so suddenly I nearly lost both rolls. The guide was yelling and gesticulating, pointing into the crater. I simply could not lose the roll, so I thrust it into place, rolled it faster than film was ever rolled before, and joined the guide. A huge, boiling, twisting column of sulphurous smoke was shooting upward from below. I waited for it to cut the opposite rim so I could take it as it rose in front, but, alas, the clouds which had blanked my view repeatedly, swept in from behind and mingled with the smoke. Perhaps it was for the best, as the stiff breeze kept the sulphur fumes away.

On the rim were fresh, clean rocks resting on a dust-covered

Airplane photograph of Mt. Popocatepetl, Mexico, in eruption.

Photographs by R. L. Glisan.

Upper—Guides and Animal Boy leaving Amecameca. Middle—Popocatepetl from ridge above camp. Lower—Guide near rim of the crater, elevation 17,794 feet.

surface, convincing me that they had been tossed there recently from the crater. I picked up a small specimen.

I dreaded the descent on that icy slope and was greatly relieved when the guide went over to one side and started down long narrow tongues of scoria, small, loose rock and sand, more or less saturated by moisture, frozen when we ascended, but softened by the sun to give fair footing going down. We had no opportunity for sliding, but worked down one scoria tongue until it died out, then crossed to another, avoiding the ice field until near its lower slope, when we crossed over and picked up the trail near LaCruz and made Tlamacas at 1 o'clock. I was regaling the others with an account of the ascent while enjoying a cup of chocolate, when the scientists appeared requesting permission to see the rock the guide reported I had picked up on the rim. At first they scoffed at the idea that it could have been ejected from the crater, but after I repeated my story while they fingered the rock, they decided, as far as I could judge through my friend's interpretation, that the fiery blast of the explosion had broken fragments from the overhang down in the crater's throat.

We made Amecamecca that night and Mexico City the next morning.

The volcano continued its activity, belching out smoke to such extent that the following day President Obregon sent an aviator there who returned with a report of the violence of the volcano. The natives had fled from nearby. The Mexican papers quoted the scientists as authority for the volcano ejecting rock. An Australian volcanic scientist named Hyde made the ascent the second day after our ascent and reported seething flames in the crater pit. I can only add, in conclusion, that it was one of the real thrills of my life.

The solemn peaks but to the stars are known,
But to the stars and the cold lunar beams;
Alone the sun arises, and alone
Spring the great streams.

—*Arnold.*

Mazamas *in* Paradise Park, Mt. Hood

July Fourth, 1922

By JAMIESON PARKER

Ever since the year 1846, when Samuel K. Barlow opened his toll road over the Cascade Range, Mt. Hood has been accessible. In succeeding years thousands of immigrants with their ox-teams skirted the very base of the mountain as they passed through this now historic gateway to the Oregon Country, on the "last lap" of the Oregon Trail. Due beyond doubt to its close proximity to this well-worn route of travel, the south slopes of the mountain have been explored since an early date; the north side has also been accessible and popular for many years;—and it is undoubtedly safe to state that Mt. Hood has been climbed by a greater number of persons than any other of the major snow peaks of the Pacific Coast. In consideration of these facts, it seems hardly believable that the entire west side of the mountain is still practically unexplored—that on the southwest slope, hardly more than a mile from the beaten path of ascent from the south, a gem of alpine beauty has remained through all the years unvisited, until last July, by any organized party of mountaineers. Such is Paradise Park, reached by a few hours' climb from the old Oregon Trail, and first officially visited by the Mazamas on July 1, 2, 3 and 4 of this year, 1922.

The existence of Paradise Park has been known for many years, and it is shown accurately on the U. S. Geological Survey map of Mt. Hood. We do not know who discovered or named it. It is probable that its only regular visitors have been sheepherders, among whom it would naturally be popular, due to the excellent pasturage offered by its green meadows. The park consists of a series of sloping and undulating benches, cut by several shallow ravines. It lies just below the timber-line on the southwest side of the mountain, at an average elevation of about 6,000 feet above sea level. A natural and direct approach is formed by the long ridge which slopes gradually downward from the mountain between the canyons of Zigzag River and Lady Creek and meets the road in the valley near the confluence of the two streams. The best starting point for the trip on foot is the "Twin Bridges" on the Mt. Hood road (the recent re-grade of the Barlow road), about six miles beyond Rhododendron.

Two well-known Mazamas, Mr. and Mrs. John A. Lee, visited Paradise Park in September, 1921, and their enthusiastic descriptions*

*See "Paradise Park and the West Side of Mt. Hood," by John A. Lee, *Mazama*, 1921.

increased the desire that many of us already had to visit the region and "see for ourselves." Mr. Lee was leader of the expedition. A train of pack animals was provided to carry the general commissary and personal dunnage. Accompanied by the cook, Mr. Lee started a day in advance of the party, to establish the camp and supervise the packing.

There were fifty-three in the main party, which left Portland Saturday afternoon, July 1. Between the hours of five and seven that afternoon the stages delivered their passengers at Twin Bridges. Here we found, inscribed on a tree beside the white torrent of the Zigzag, a thorough description of the route to be followed—so thorough that we knew it could be the work of no other than John Lee himself. The sun was already far in the west, so after a few minutes' refreshment we bade the stream good-bye and set out for the higher lands.

At the very start one encounters the only steep climbing in the whole trip—a scramble up to the top of the ridge. Once arrived at the crest, the route is obvious; it is only necessary to follow along the ridge, directly towards Mt. Hood. The sheepherders' pack-horses have trampled down an intermittent trail, or path, throughout the entire course, the distance of which is about six miles. There is a total gain of some 3,000 feet in elevation. During the first half of the way we traveled through a burned area, which, though it shared some of the usual forlorn characteristics of all such places, had through its very adversity gained several rare virtues. On every side the eye found no obstruction to the majestic breadth of view. Mt. Hood loomed up straight before us, in a position to show us to greatest advantage the magnificent sweep of its southern sky-line—a masterpiece of nature's sculpture. There were myriads of rhododendrons, loaded with full-blown blossoms of every shade from coral pink to deepest crimson, and a hopeful note was brought into the landscape by the presence of many flourishing second-growth trees of several varieties. To be sure, it must be observed in passing that we had one great sorrow;—the mosquitoes seemed to be holding a general convention that day, and greatly outnumbered us, disputing every step of the way. But truly it is only with a desire for historical accuracy that we mention this detail, for human nature has a kind way of making us forget tribulations of the past if there are joys to remember.

Soon we entered the green trees, stepping as across a line of demarcation from the twilight of the open burn into the deep shades of the forest. Night had suddenly come. Somewhere along the line the flicker of a lantern began to dodge among the trees, and then another, marking the advance of our band. Due to the darkness and the under-

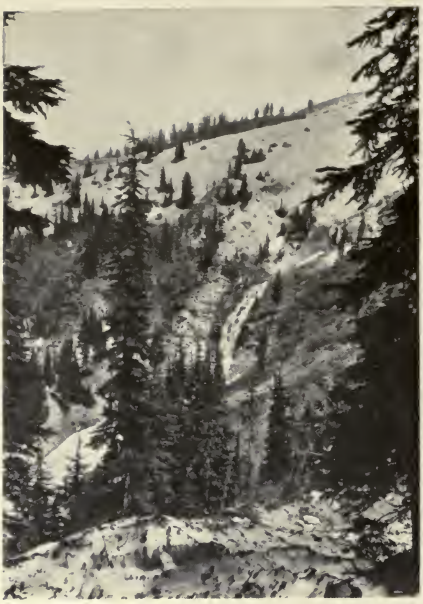
growth of the forest, the trail became less and less distinct, and time after time we would lose the blazes altogether, only to find them again farther along. We finally decided that hide-and-seek might be a good enough game in its way, but we had had enough of it for one evening, and struck a bold line up the ridge.

Almost imperceptibly the forest changed its character as we progressed, trees and undergrowth gradually becoming less dense and tangled. The almost sub-conscious "sense of altitude" told us that we were nearing the alp-lands. The first open glade and the first patch of snow each brought its thrill of elation. But the last mile is inevitably the longest, for it is always full of false hopes. The smoke of the camp-fire, even the aroma of fried bacon and many other delectables, were repeatedly sensed by optimistic noses for miles along the way. But finally there came a complete change: we emerged entirely from the forest, and began to traverse open meadows dotted with groves of tall dark trees. Here we met Mr. Lee, who had come down to cheer us with the word that our camp was only a quarter of a mile farther on. We were now under the open sky, and in the starlight we were able to perceive ever-widening vistas around us. As we reached the crest of a steep slope Mt. Hood suddenly appeared, rising in ghostly majesty from our very feet, it seemed. From the next ridge we had a still more welcome prospect—the glow of a camp-fire, and in a few minutes more we were standing within its circle of flickering light, at our journey's end.

The trip from the Twin Bridges had taken us about four hours, travelling at a leisurely pace, and including several short stops. A few who were more ambitious had made it in three hours, which would undoubtedly be easy walking time if there were a good trail.

In the bright sunshine of the following morning we were able to form a clearer idea of our location, and to appreciate its many beauties. The great white bulk of Mt. Hood, and its rocky ramparts, towered above on one side, dominating the whole scene, but towards the south and west the eye was free to wander on through flowered fields to an infinity of space beyond. All the lesser summits lay below us. Zigzag mountain was nearest at hand. We looked down the whole course of the upper Sandy River canyon as clearly as if on a map. Mt. Jefferson stood out plainly on the left; Mt. St. Helens on the right. One of the distinctive features of Paradise Park is that instead of lying on the floor of a valley surrounded by mountains, as are the majority of such alpine parks, it is perched like an eagle's eyrie on the shoulder of a great mountain, commanding a magnificent view. Much might be written of the beauties of the immediate landscape, and its interesting

Photograph by Thomas J. Bones.
Mt. Hood from South Fork of Lost Creek, Paradise Park.



Photographs by Everett Philpoe and Thomas J. Bones.

Paradise Park, Mt. Hood. Views.

Upper left—North Fork Lost Creek. Upper right—South Fork Lost Creek. Middle—Monolith on edge of Sandy Canyon. Lower—Mt. Hood from Camp Site.

details,—of the masses of flowers of many colors and varieties, of the birds, trees, meadows, and streams. One spot is particularly unusual and fascinating,—a deep rocky dell, where, from a precipice crowned with bright-hued flowers and overhanging vines, a dozen delicate waterfalls seem to drop like chains of jewels. Standing beneath one of these fairy showers it is easy to believe that "cleanliness is next to godliness"!

Many interesting excursions can be made starting from Paradise Park. One of these was undertaken by a party on Sunday (our first day in camp) under the guidance of Mr. Lee. An attempt was made to reach Yocum Ridge, which is one of the most prominent topographical features of the west side of Mt. Hood. It is the continuation of the cleaver between Reid and Sandy glaciers, stretching like a long buttress from the very summit of the mountain; and viewed from the distance, its forested slopes, interspersed with open country, present an inviting aspect. In an air-line it was scarcely two miles from our camp, but two tremendous canyons intervened, with walls of steep rock and sliding debris. On this day Mr. Lee selected a route which he hoped would afford a crossing of the canyons lower down, to avoid the steepest places. A reconnaisance of that region was made, but the obstacles encountered made progress slow, and the party was unable to reach the actual slopes of Yocum Ridge. It is probable that with further exploration, a practicable route will be found, perhaps around the bases of Zigzag and Reid glaciers.

On the following day, Monday, July 3, the first recorded ascent of Mt. Hood from Paradise Park was made. Mr. Lee was again leader of the party, which numbered thirty-six. The route was simple and direct,—straight up Zigzag Glacier until the usual south-side trail was intersected just below Crater Rock. Good time was made, the party returning in the middle of the afternoon, enthusiastic and "one hundred per cent" successful. This ascent demonstrated the advantages of Paradise Park as a starting point for the mountain. The climb is easy and direct, the distance is much shorter than from Camp Blossom, above Government Camp, and the camp itself incomparably more agreeable.

It was with genuine regret that we departed from our hospitable camp next day. Some of the party left early, in order to explore the canyons of Zigzag River or Lady Creek on the way down, but there were a large number of "bitter-enders" who remained until the last possible minute. At four in the afternoon our stages were waiting for us at Twin Bridges. They were soon filled and dispatched, and we finally arrived in Portland before dark.

In the opinion of the writer this short trip was one of the most important ever taken by the Mazamas, for it opened up a territory new to us and to the public,—a territory in which we are vitally and permanently interested, and which will mean more and more to us as time goes on. To be sure, the west side of Mt. Hood can never be made fully accessible until the boundaries of the Bull Run water reserve have been revised to include only what is just and reasonable,—the watershed of the Bull Run River. But it is certain, in view of the undeniable facts of the case, that a better judgment will some day prevail, and the source of our city's water supply will remain inviolate while at the same time the most beautiful part of Oregon's proudest mountain will be accessible for those to whom it belongs—the people. How long it will be before this inevitable change takes place depends only upon the desire for progress felt by the people and the officials of Portland. In the meantime Paradise Park remains open. A good trail will probably be built before long, following the present route. Here is a field of opportunity. Those of our club who were so fortunate as to participate in the July trip were deeply impressed, and it is to be hoped that Paradise Park will soon be regarded by all Mazamas as their favorite mountain playground.

Second Annual Outing, Central Oregon Mazamas

MT. JEFFERSON

By CHARLES G. WILSON

The highest of the snow-caps keeping watch over the Central Oregon region is old Mt. Jefferson. Located in one of the wildest and most beautiful sections of the Cascades, she sends out a silent call to all who love to explore the few remaining regions still undisturbed by human hand.

Having conquered the summits of Bachelor, Broken Top and the South Sister, the Central Oregon organization of Mazamas felt that their next objective should be something that would appeal to such experienced mountaineers.

Our party of twenty left Bend and Redmond late Saturday afternoon, September 7, 1922, by auto, and started for Mt. Jefferson via

Sisters, entering the Deschutes National Forest and following the west bank of the Metolius River to Eagle Creek, where we camped for the night. Eagle Creek fulfills all possible requirements for the perfect camp.

Early the next morning our pack train arrived from Hanson ranch to relieve us of our dunnage. The merry party started on a northwest course over the Huckleberry trail for Hunt's Cove on the western slope of the Cascades, a distance of about fourteen miles from the first camp. The Huckleberry trail we found to be well named, for after tramping several miles we found ourselves in the midst of an extensive patch. The signs of bear were so evident that we felt duty bound to assist in harvesting the berries. The trail led us close to the south shore of Cabot Lake. While in the huckleberry area we found several smaller lakes lying hidden among the jack-pines and rugged hills. After tramping about ten miles, gaining some two thousand feet elevation, we crossed a low sharp ridge recognized at once as the summit of the Cascades. It was here that we got the first comprehensive view of our next day's objective. To the north we could see the pinnacle of Mt. Jefferson, foreboding, towering, a great cathedral spire rising to an elevation of 10,523 feet. The remaining miles of the day's hike were comparatively easy, as the trail from here led us on a down grade keeping the same general direction through scrubby evergreen timber so common to the higher altitude of the mountains. This territory lies within the Santiam National Forest. Standing by itself in the woods, a few hundred feet from Hunt's Cove, we found the stone monument erected by the Mazamas (mother organization) on their annual outing in 1917. Those who built this neat little tower have the assurance that it still stands as they left it.

A welcome sight to the tired and hungry travelers was Hunt's Cove, a beautiful mountain meadow that lies almost south of Jefferson. This dream-spot is surrounded by precipitous mountain walls. A spring of ice-cold water issues from its meadows and leaps westward over the terraced meadows on its way to Pamelia Lake.

Here we camped and made preparations for the big climb. After dinner a few of the party took light packs and shortened the next day's trip by hiking to the last camping spot at the base of the mountain.

Daylight the next morning saw the party wending its way up the steep southerly slope of the mountain. Most of the snow had melted, leaving fairly good footing. The morning was clear. After we had gotten well above the timber line, the distant views became a delightful feature of the climb. We could see forty miles to the east, the wide

stretch of alfalfa lands in the irrigated farming district of Central Oregon. To the south, the neighbors and relatives of Jefferson loomed up against the clear sky. The most prominent of these were Three-Fingered Jack, Mt. Washington, Broken Top, Three Sisters, Diamond Peak and Cowhorn. The west, although almost blotted out by the blue haze, showed the earth furrowed by great rolling hills timbered with evergreen.

As we came nearer the top, we could look almost straight down into the deep chasm which divides the two prominent hogbacks that project from the southwest side. The opposite hogback we recognized as the route followed by the late Dr. Stone in 1917.

The base of the pinnacle was reached without encountering any very rough climbing. Dr. Grant Skinner and Hugh Dugan, our Alpine comedians, reached the top by pulling themselves up over a shale rock bluff, and as the party observed the two, someone remarked that the boys, at times, depended a little too much on their eyebrows for support. Several others made the top by going some three hundred feet to the west under the steep clinging patches of snow, and scaling the pinnacle from the west side. It was well worth the effort to be able to place our names in the double box of the Mazamas at the summit. The party returned to Hunt's Cove by the same route, where hot coffee and a pot of mulligan awaited us, concocted by A. H. Oliver and Martin Hanson, who preferred hunting to mountain climbing. The next morning we headed for home through a thick mountain mist leaving a few of the party to explore interesting country south of the Cove. Our fourteen-mile trip back to the cars at Eagle Creek was made in four and one-half hours. In spite of the three successive days of hard work all agreed that they had never had a better time in the mountains.

The personnel of the outing follows:

Charles G. Wilson, *Leader*, Bend, Ore.
Frank Garnett, Bend, Ore.
Dr. Grant Skinner, Bend, Ore.
Ronald Sellars, Bend, Ore.
H. C. Ellis, Bend, Ore.
Clifford Smartt, Portland, Ore.
Jack Coyle, Redmond, Ore.
Omer Hoskins, Redmond, Ore.
A. H. Oliver, Bend, Ore.
Hugh Dugan, Bend, Ore.
D. M. Bernt, Salinas, Cal.
J. K. Brooke, Portland, Ore.
W. F. Hinton, Twin Falls, Ida.
H. L. Plumb, Bend, Ore.
Martin Hanson, *Packer*, Sisters, Ore.
Ella Dews Oliver, Bend, Ore.
Valborg Gribskov, Alsea, Ore.
Eleanor Becken, Bend, Ore.
Naomi Hoskins, Redmond, Ore.
Marion Hoskins, Redmond, Ore.
Eva Mowery, Seattle, Wash.

Photograph by Boychuk.

Mt. Washington, Three-Fingered Jack and Mt. Jefferson from Collier Glacier--Three Sisters Outing.

Central Oregon Mazamas on Mt. Jefferson.
Left—Starting up pinnacle from west side. Middle—Mt. Jefferson from south side of Hunt's Cove. Right—The pinnacle from south side.

Vacationing *on the* Great Divide

By Dorothy S. Brownell

There are only a few spots in the world which can not claim a boundary; one of these is the Canadian Rockies. They are limitless. Both as to form and as to extent, upon a first view they are almost incomprehensible. It is a country where exploration has only begun, and where there are many "new" mountains to be found. And there is no thrill in mountain climbing equal to the first acent of a respectable peak. This year, the Alpine Club of Canada, by making their summer outing something in the way of a scouting expedition, added this unusual interest to the camp.

The "hop-off" was made from the colorful little village of Banff, on the main line of the great Canadian transcontinental railway. Taking advantage of the walking tour which circles southward from this point, offering intermediate camps and an excellent trail for a considerable distance, the Alpine Club made one of the mountain passes on the Great Divide, well towards fifty miles in, its objective.

The route led up the Spray River. This pretty stream during the first few miles is rather lively, but for a goodly part of the way meanders down a pleasant valley, halting now and again to spread out into quiet lakes. Always on either side soar the ever-present Rockies, with their lower slopes often rosy with gorgeous beds of fireweed, but their summits so craggy that only occasional pockets retain a snow-field or glacier. The trail leads along the valley, much of the way through meadows, interspersed with pretty woods or fringes of jack-pine. Tragically numerous are the fields of old burned forests. The grade of the trail is so even (the only appreciable rise is in the last mile) that when one arrives at Palliser Pass, it is hardly conceivable that this is 6,800 feet elevation.

It is an ideal camping spot, a meadow sprinkled with hoary anemone heads and bordered with trees. The stream we followed for miles widens here to an unassuming but very lovely pool, Belgian Lake; then circles camp from a roaring falls—its source the glacier above, which almost overhangs camp. On either side rise the mountains, as close as one's own shadow, as remote as ancient monarchs. But if the mountains do not welcome a newcomer, there is no lack of hospitality in camp itself. That most kindly and delightful gentleman, Mr. A. O. Wheeler, was the official head of camp this season; while Mr. S. H. Mitchell served as a thoughtful and efficient secretary. And everyone seemed intent on fostering the pleasant atmosphere they created.

An Alpine Club outing would scarcely be possible without Swiss guides. As usual, a couple of these dependable and clever chaps were furnished the Club this year, Edward Feuz and Rudolph Aemmer.

The biggest climb of the outing was Sir Douglas Haig, 11,174 feet, the magnificent peak to the east of Palliser Pass. A round dozen, including the guide, made a large party for such a difficult mountain, and the successful scalers never wearied of telling the stay-at-homes of their adventures. King Albert also proved a "tough customer." Mt. Tipperary, Mt. Back and Queen Elizabeth were of interest to the less ambitious. Besides climbing there were plenty of opportunities for scrambles to enchanting places, as far or as near as one wished.

There was a small advance camp, nearly twenty miles beyond at Kananaskis Pass, from which several new and interesting climbs were also made. Kananaskis was a real beauty spot, but the trail thither was so atrocious that many refrained from the trip. The rugged steepness of the intervening country and the old burns made the distance very discouraging, and a somewhat shorter course was finally mapped out through the mountains, "over the glaciers."

Including several climbs made by subsidiary trips, before and after camp, several first ascents were registered.

On the return, nearly everyone took the walking tour by way of Mt. Assiniboine. The trail from Trail Center Camp on the Spray, over Wonder Pass to Assiniboine, was new this year. The Assiniboine end of this, especially, is an enchantment. The path leads for miles high above Marvel Lake, most appropriately named, blue as a sapphire, turquoise in other lights, with a narrow border of evergreens, and above, a deep rim of mountains, crowned with hanging glaciers. As for Assiniboine—well, Assiniboine puts a spell, like a conjurer, on whoever gazes upon it.

The one unpleasantness of the summer camp was the smoke which absolutely clouded the atmosphere most of the time, discouraging climbing, preventing photography, and doing its best to depress holiday spirits generally. No accidents marred the outing, and the few scrapes which arose, as they will on any outing, only added a zest to the camp.

The 1922 outing of the Alpine Club of Canada will be outstanding as a reconnoitering camp. Other camps may be remembered for other reasons, but this season a large party of mountain enthusiasts camped at a point accessible to those ranges recently named the French Military, the British Military, and the Royal groups, thus opening the mountains wider towards civilization, and, who knows, perhaps thus making a bit of history.

Photographs by Boychuk.

Left—The Youngest Mazama, Three Sisters Outing. Upper right—The mess line. (Note the rain shelters.) Lower right—"The President's Dinner."

Activities at Camp Montague.

Photographs by Boychuk.

The President's Message

(*Delivered at the Annual Meeting in the Club Rooms, October 2, 1922.*)

On a serious and candid review of the club year which closes tonight, we feel justified in regarding it as a prosperous one. The membership roll shows a reasonable increase, bringing it up to the highest mark in our history; the report of the faithful guardians of the strong-box shows the treasury to be in a healthy condition, notwithstanding reasonable liberality in expenditures for the benefit of the club, and careful provision for keeping its properties in sound condition and making such additions to working equipment as seem desirable, including a stereopticon for picture displays. The club has maintained an excellent outward seeming, and what is of infinitely greater importance, its internal condition is of the highest order. Never, I am sure, has there been a more loyal and devoted membership, never a more complete absence of faction or schism, never a finer atmosphere of friendliness and good will. The prompt and cheerful readiness to labor for the club, often at some personal sacrifice, which invariably meets the frequent calls of the council, is quite beyond praise, and not less praiseworthy is the frank and helpful spirit in which, almost without exception, criticism and suggestions are brought to that body, which we hope has not been insensible to its reciprocal duty to receive them with open mind and make use of them for the general welfare.

It would be impossible, within the limits of a report of this kind, to enumerate, even in the most general terms, all of the activities of the club year, but certain of the most typical and notable of them should be referred to.

The educational committee has been especially industrious and efficient. Under its auspices a series of lectures on dynamic geology was given in the club rooms by Professors Packard and Hodge of the State University, to audiences which taxed the capacity of the place. The success of the course was further demonstrated by the large number of amateur geological enthusiasts who tramped some miles up the Columbia River Highway in a pouring rain on the "geology walk" which closed the series, and brought vivid practical application to reinforce the lessons of voice and pencil. Other lectures on travel subjects, and one on map making by Mr. L. A. McArthur, were also given. It is earnestly hoped that the signal success of this undertaking may bring it about that courses of the kind are offered by the club every winter as a part of its services to its members, to be counted on not less than its out-of-door activities. To make our annual and

weekly excursions profitable to mind as well as body is an enterprise which may well enlist our best powers. It is not necessary to enlarge upon the advantages to out-door folk of even the most trifling modicum of training and knowledge in the natural sciences, in that it invests every object the eyes meet in the open with lively and compelling interest. The eagerness with which any one at all proficient in these studies is welcomed, listened to, followed about, shows both the desire for and the benefit of such work more eloquently than words could do.

Another, almost the most important, of the functions of the club was illustrated in the Fourth of July excursion to Paradise Park, Mt. Hood, by which the beauty and charm of this region, before almost unknown, became in a sense our peculiar possession. It seems almost incredible that a spot at once so accessible and so lovely, upon the mountain which is the chief glory of our State, should have been so long neglected. Now that the club has been led thither through the initiative, happily, of our own members, we certainly should see to it that the work of exploration is carried on, on behalf of the whole club, in such wise that every canyon, ridge and meadow of our near and noble mountain is intimately known, not only to our accomplished mountaineers, but through excursions inspired, organized and carried on as this one was, to all our active membership. Nothing could be more appropriate to the purpose for which we exist than exploration work of this character.

This subject leads, naturally, to consideration of the long-agitated question of a lodge. The desire for a lodge at Paradise Park, implying as it does, preliminary work on a road or trail to it from the Government Camp Highway, is in the minds of many members and has been frequently expressed. Offers from two separate sources have been informally presented to the council of sites on or near the Columbia River Highway, both offers carrying also, as we understand, a large part of the materials for the construction of a suitable building. For sufficient reasons no definite steps have been taken during the current year by the Lodge Committee toward the final selection of a site and erection of a building. The matter is now up for active consideration. I venture to offer my personal opinion, binding on no one else, that the lodge of a mountain club should be in the mountains, and afford facilities for mountain work of a severe type as well as milder walks and climbs, and that Mt. Hood, for reasons which will readily suggest themselves to everyone, is the most appropriate place for the establishment of a local habitation of an Oregon mountain club. Facilities for winter sports, among the most interesting and bracing of outdoor plays,

should also be borne in mind in the selection of a site for a lodge. We have not hitherto given proper attention to this branch of recreation.

The Lodge Committee for the coming year will have its work cut out for it. If after threshing out all the pro's and con's, and giving everyone a hearing, it should be able to reach an early decision which shall be concurred in by the body of the membership, who should be consulted on a question of this vital importance, we may hope to turn our full energies to the accomplishment of something permanent in this direction. I may recall to you that funds are available for this purpose. The savings account, set aside in the expectation that it would be expended in this direction, was $3,045.00 at the beginning of the year, and is now $3,379.00.

Returning to the actual, as distinguished from the hoped for, achievements of the club, we have to record the appointment of a standing committee, known as the Photographic Committee, the duties of which are to collect and arrange the pictures now in our possession, and make well-thought-out plans for the accumulation and preservation of others. This should mark the beginning of a photographic library, which might easily become one of the best collections of scenic photographs anywhere. Ample material can readily be obtained from our members as their pictures are taken from year to year; it will need only judicious selection and skillful arrangement to create a gallery which in variety, extent and beauty, would in time be unsurpassable.

A new number of the Oregon Out-of-Doors series, on Crater Lake, well composed and edited, has been produced and promises to have a very favorable reception and a large sale. The excellent work done on the last number of the *Mazama* is familiar to you all. We believe it does us high credit both at home and abroad. The local walks have been competently handled and well patronized during the last year. They are an indispensable recruiting ground for new members. The annual Mt. Hood climb, and the Paradise Park expedition already referred to, may be especially mentioned. They will be more fully reported elsewhere, and need not be enlarged upon in this connection.

The social life of the club has not been neglected. The Entertainment Committee has performed its part with energy and success; weekly lunches at the Y. W. C. A. have become an established institution and afford a convenient and pleasant opportunity for keeping up and renewing acquaintance; we have had a number of invitations to make displays at public exhibitions, notably the annual Bird and Flower Show of the Audubon Club, of our trophies, pictures and paraphernalia, to all of which we have responded creditably. Some steps have been taken toward the repair and rearrangement of the furnishings of the

club rooms, and the council is on the alert to discover opportunities for establishing ourselves in more commodious and pleasant quarters.

Agreeable as is the retrospect of a year full of pleasurable experiences and with a basis of solid accomplishment, we must not forget for a moment that there is an unlimited field of labor and achievement yet open to us. We perform our regular work well, increasingly better, we think; but it is the inexorable law of life that there must continually be progression or retrogression, and if the degree of success and prosperity to which we have attained leads us to complacent satisfaction we shall inevitably go backward. Great tasks await the doing; our educational work is only a beginning; the lodge is but an unrealized dream; the joys and gains of winter recreations in the snows are hardly known to us, and vast areas of our loved mountains are yet untrodden by the "feet of the young men." The pictorial record of the scenes we hold fondly in memory is incomplete and difficult of access. An infinity of work and achievement beckon us forward. Let us press on then with zeal and wisdom worthy of our high calling to make this club all that it ought to be and might be in value to the community and in service to its members.

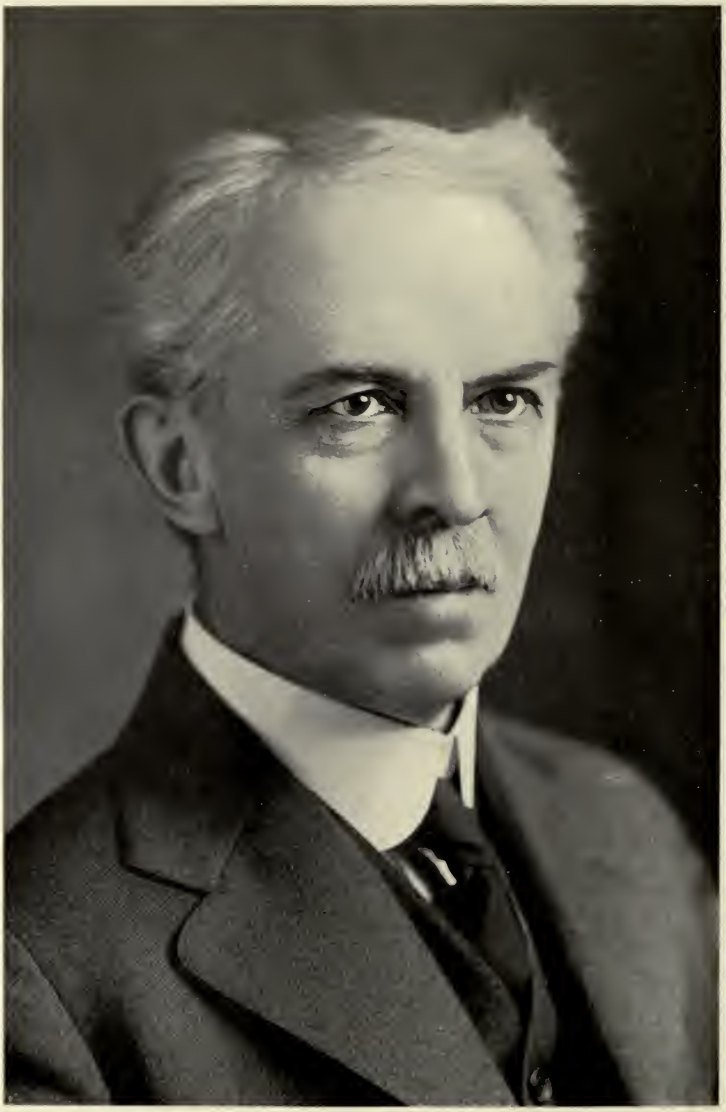
RICHARD W. MONTAGUE

List of Annual Mazama Outings

1894—Mt. Hood.
1895—Mt. Adams.
1896—Crater Lake.
1897—Mt. Rainier.
1898—Mt. St. Helens.
1899—Lake Chelan, Mt. Sahale.
1900—Mt. Jefferson.
1901—Mt. Hood.
1902—Mt. Adams.
1903—Three Sisters.
1904—Mt. Shasta.
1905—Mt. Rainier.
1906—Mt. Baker.
1907—Mt. Jefferson.
1908—Mt. St. Helens.
1909—Mt. Baker.
1910—Three Sisters.
1911—Glacier Peak.
1912—Mt. Hood.
1913—Mt. Adams.
1914—Mt. Rainier.
1915—Mt. Shasta.
1916—Three Sisters.
1917—Mt. Jefferson.
1918—Eagle Cap, Wallowa Mts.
1919—Mt. Rainier.
1920—Mt. Baker.
1921—Diamond Peak, Crater Lake.
1922—Three Sisters.

Photographs by Boychuk.

Weather contrasts on the Middle Sister.



Dr. Frank Barbour Wynn

In Memoriam

DR. FRANK BARBOUR WYNN

By FRANK BRANCH RILEY

Dr. Frank Barbour Wynn, distinguished Indiana physician, nationally-known scientist and publicist, an alpinist of renown and a loyal Mazama, was born May 28, 1860, in Franklin County, Indiana. Early in the morning of July 27, 1922, while making an ascent of Mt. Siyeh, a lonely peak on the Continental Divide in Glacier National Park, Montana, this splendid American was stricken with apoplexy and died literally in the arms of the mountains he loved.

Dr. Wynn was a man of astonishing versatility. He was an authority in the field of clinical medicine, a teacher and practitioner. His medical monographs are models of study and research.

The Mazamas knew him well as a poet of virility and grace and tenderness. Many of his sweetest songs were written and first interpreted in the timber-line camps and around the evening fires of our organization.

Dr. Wynn's ennobling civic spirit touched public enterprises in his city and in his native State, and vitalized them.

Of a deeply religious nature, he was a passionate priest of the universal religion of God's great out-of-doors.

As a mountaineer, Dr. Wynn's prowess, his tenacity, his buoyant enthusiasm, his admirable technique and his reverential spirit are a part of the fine traditions of the Mazamas.

Dr. Wynn's activities in the Montana Rockies were particularly noteworthy. In Glacier Park he made many first ascents; more than any other man he helped to popularize the sublimities of that region with Americans everywhere.

Dr. Wynn was a man of friendships, with inexhaustible wells of human sympathy and love; a husband and father, tender and loyal; a comrade pure-hearted and lofty-minded.

Just before Dr. Wynn left for the West with Mrs. Wynn and his son James—his companion in mountaineering adventures and his partner in the practice of his profession—on a holiday that was to end so tragically, DePauw University in Indiana conferred upon him an honorary degree; and the President of the University, in the ceremony, used this beautiful characterization:

"A loyal son of this school of learning, a lover of nature, at home among alpine heights, founder of learned societies, master in the field of science, ministering always to the needs of men."

Book Reviews

"Oregon Out of Doors."

1. Mt. Hood. This is an admirably planned and arranged pamphlet, bound in heavy green paper, and containing in compact form much useful and interesting information. It is precisely such a compendium as every intelligent visitor to the mountain or its environs would wish to carry away with him. Convenient facts about the various ways of approaching the mountain, the names around it and their origin, the lookout station on the summit, and the like, are mingled with historical information concerning the discovery and early ascents—fascinating chronicles, arousing the wonder we always feel when we read of the incredible toils and hardships of the pioneers who conquered the wilderness with bare hands—and bare feet, too, at times. Included also are authentic articles, clearly written so as to be understanded of the people, touching the geology, and the fauna and flora of the region, contributed by authorities of the first rank. Finally we have a taste of the romantic legends of the aborigines, and brief hiographical sketches of men who have, in one way or another, identified their lives with the mountain. A good index renders the contents more available.

Oregon Out of Doors. No. 1. Mt. Hood. 4¼x6, pp. 121, published by the Mazamas, 1920.

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2. Crater Lake. By reason of its more recent publication and greater abundance of illustrations, still more perhaps because of the peculiar fascination that attaches to this unique and wonderful place, this volume is even more interesting and indispensable than the former. Special mention should be made of the fine and informative photographic reproductions which accompany Professor Sweetser's excellent article on the common wild flowers of the park and make it almost as instructive to the student as a lecture with a herbarium Exact and commonplace fact, historical and personal reminiscence, wild legend and absorbing geologic story—it is difficult to think of anything which can be embodied in type and engraving about Crater Lake which does not find at least mention and reminder in this little volume. Needless to say, the elusive yet abiding charm which throws its spell over so many of us who, having seen, can never forget, cannot be captured and held on the printed page, but these pages may well serve a more practical purpose, and when this is done may sometimes recall that strange sense of almost intolerable beauty and wonder, felt nowhere else, that we felt when first that vast flood of color whelmed us beneath its azure tide, like a dream come true of the "light that never was on sea nor land."

Every lover of the out-of-doors should have both these little books, vest pocket in size, and yet revealing a hint of Nature at her very best.

Oregon Out of Doors. No. 2. Crater Lake. Uniform with the above. Mazamas, 1922.

"The Friendly Arctic." In this volume Stefansson gives the account of his latest journey of exploration in the Arctic regions. During previous expeditions Stefansson became convinced that the vast uninhabited territory near the North Pole contained sufficient animal life to sustain human life. All accounts of early explorers, geographies, and even the Eskimos, differed with this belief. The general idea being that since animal life was not visible it did not exist.

When the expedition was first planned it was to be financed by the American Museum of Natural History and the National Geographical Society. As the funds were inadequate, and feeling that the Canadian Government might join in the support of the expedition, Stefansson went to Ottawa, where Sir Robert Borden, the prime minister, became much interested in the plan, and decided that the Canadian Government should assume the whole responsibility and expense of the enterprise. Accordingly the most comprehensive polar expedition that ever sailed was fitted out. The scientific reports of the expedition are to be issued by the Canadian Government.

Five years were spent in traveling through vast areas, sometimes on land, sometimes on sea. During this time there were many hardships to be endured, but Stefansson was able to prove that even the most northerly seas furnished plenty of seals for food and fuel. Instead of the desolation which most accounts of polar exploration give, Stefansson shows that the Arctic is really friendly to man and provides ample resources for comfortable living if he will but make the effort to use them.

The thrilling tale of adventure, together with the excellent descriptions of the Eskimos and the beauties of the country, make fascinating reading. Much charm is added by numerous illustrations and accurate maps. The book gives much scientific information and should prove most interesting to all who desire to learn the true condition of the far north.

BEULAH MILLER CARL.

VILHALMUR STEFANSSON. *The Friendly Arctic; a Story of Five Years in the Polar Regions.* New York, Macmillan Co.
(Supplied by the Bureau of Associated Mountaineering Clubs in North America.)

"MOUNT EVEREST, THE RECONNAISSANCE, 1921." Everyone knows how keenly each mountaineer watched the daily papers both in America and abroad to get the details in the experiences of those men who made up the Mt. Everest party. As you read in this recent book the account of the 1921 reconnaissance you feel that you are not merely a reader, but really a member of the expedition which accomplished this first great piece of exploration of post-war days.

The introduction is written by Sir Francis Younghusband, president of the Royal Geographical Society and chairman of the Mt. Everest Committee, which organized the expedition.

Colonel Howard-Bury, the leader, gives the story of the expedition from Darjeeling through the Chumbi Valley, the Tibetan Plateau, Tingri, Kharta, the Kama Valley and back to civilization again. On the way to the 20,000 foot camp in the Upper Kharta Valley, the reader sees with the author the wonderful golden barley fields ripening at an altitude of 14,000 feet—almost as high as our Mt. Rainier; enjoys, too, the Alpine garden at 17,000 feet elevation, and with him essays to climb the rock pinnacle—a real gymnastic feat when attempted 19,000 feet above the sea.

Every word of the narrative fascinates and grips, and it scarcely seems possible that George H. Leigh-Mallory, whose article comes next in the book, could do aught but repeat. But here again is found an intensely interesting account, this time of the various summit approaches that were explored and the apparent possible route.

Then follows an article on the flora and fauna of the Tibetan country, ably

written by Mr. A. F. Wollaston, and a summary by Major O. E. Wheeler, of the survey work which they undertook.

Dr. A. M. Herron deals with the geology of the region, and Professor Norman Collis, president of the Alpine Club, contributes "An Appreciation of the Reconnaissance," this too, being very readable.

One is pleased with the fine illustrations and with the maps which make it possible to visualize very clearly the route taken by the party.

No lover of the high places, who annually feels the call of the mountains, should fail to read this real book.

LAURA H. PETERSON.

LIEUT.-COL. C. K. HOWARD-BURY, D. S. O., and other members of the Mt. Everest Expedition. *Mt. Everest. The Reconnaissance, 1921.* Longmans, Green & Co. 1921.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"BIRDS OF THE PACIFIC COAST." One of the very newest books that will be of great interest to those who love the out-of-doors is this one by Willard Ayres Eliot. Anyone who has come suddenly out into one of the flower meadows of our mountains and, on the edge of a sparkling little lake, has seen dipping and bobbing and then darting under the water our friend, the ouzel; or who, when camping deep in the woods, has awakened to the song of the feathered folk, will waste no time in getting hands on this book. Written by a man who has spent his life in the study of our western birds, illustrated by no less an artist than R. Bruce Horsfall, it cannot fail to please.

The text aims to accomplish two things; it tells the amateur, especially, where to look for a bird and describes that bird's song and nesting habits. No attempt is made to describe its plumage unless there be some very conspicuous markings.

It contains fifty-six color plates done in four-color work. These pictures are extremely life-like and very true to nature, thus acting as an important aid in the identification of the 118 birds illustrated. The birds shown are those common to British Columbia, Washington, Oregon and California. Many of these are found east of the Rockies and a few beyond that point.

In the front of the book is found a systematic, scientific synopsis of all birds found north of the Mexican boundary and a complete cross index. The introduction is written by the well-known ornithologist, William L. Finley, while, at the close of the work is a complete, absolutely up-to-date list of all the birds in the coast regions, giving both the common and scientific name.

The size of the book, which is five by seven inches, appeals to the field student, who can thus carry it conveniently in his pocket and have always a ready reference when it is most wanted.

Although the facts are technically scientific, they are presented in popular language and the book should appeal to all bird lovers.

LAURA H. PETERSON.

WILLARD AYRES ELLIOT. *Birds of the Pacific Coast.* G. P. Putnams Sons, 1922.

"WATCHED BY WILD ANIMALS." In characteristic inimitable fashion Enos A. Mills gives us in this nature book an absorbingly interesting tale of animal life in the Rocky Mountains. He presents a vivid picture of the beauty and adventure as well as the hardships among the peaks.

The very first chapter challenges every Mazama to read the rest, for it has as its central character the Mountain Goat —the real Mazama. He is pictured on a Mt. Rainier glacier picking his way carefully over the rocks, fearlessly

crossing a crevasse, and with his keen eye measuring the distance from crag to crag before he essays the final leap to safety on the sheer summit of a rock pinnacle. Mountaineers may well take lessons in co-ordination of head and footwork from this animal, for though he is "made up of odds and ends," he is still the mountaineer of mountaineers.

Chapters no less interesting give us precise and picturesque details about the life and habits of the coney, "the Hay Maker of the Heights," the persistent beaver, and the coyote, who is called "the Clown of the Prairie."

In addition to the description of individual animals, a plea is made for the protection of all, but in particular, for the black bear, the comedian of the forests. This family seems to be gradually decreasing in number, and unless steps be taken, extinction is threatened.

Although this book is not fiction, it contains enough delightful humor to make it attractive to a casual reader, and its literary merit is such as to meet the demands of the more critical.

LAURA H. PETERSON.

ENOS A. MILLS. *Watched by Wild Animals.* Doubleday, Page & Co. 1922.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"THE CALL OF THE MOUNTAINS." Almost any book, when edited in a de luxe edition, is attractive, but couple with the last word in book-making, a delightful text, richly illustrated, and the result is irresistible. Such is the very late book of Mr. Jeffers on mountaineering. Here, in his first chapter, is the convincing answer to the oft put question, "Why climb mountains?" The author is not a Dr. Traprock who takes his voyage to the North Pole sitting in his New York office, but as secretary of the Associated Mountaineering Clubs of North America, he has, with sleeping bag and ice axe, acquired an intimate acquaintance with all the "high spots" on the Continent, and in his book writes most entertainingly of how he did it.

Of special interest to Mazamas will be the chapters on our own local mountains, the wonderful pictures by R. L. Glisan and Asahel Curtis of the *Mountaineers*, and the first authentic narrative of the tragedy on Mt. Eon, where our much-loved Dr. Stone met his untimely end and Mrs. Stone was rescued after the most trying experience imaginable.

No mountaineer's library will be complete without this volume.

JERRY E. BRONAUGH.

LEROY JEFFERS, F. R. G. S. *The Call of the Mountains.* Dodd, Mead & Co., New York. 1922.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"THE HEART OF NATURE" OR "THE QUEST OF NATURAL BEAUTY." Merely another fascinating book of travel from the pen of this indefatigable explorer and distinguished author. The titles of the opening chapters, The Sikkim Himalayas, The Teesta Valley, the Forest, the Denizens of the Forest, lead one to suspect this. But a new note is struck in Chapter V—the Sum Impression. One reads: "The artist has now to stand back and view the forest as a whole. Men's hearts instinctively go back to nature, and in consequence, they see beauty in her. But if men ever came to hold the idea—as so many since the doctrine of the survival of the fittest has come into prominence are inclined to do—that nature is at heart cold and hard and recks nothing of human joys and sorrows, then love of nature would fade from men's hearts—men would never again see beauty in her."

But if on the other hand, the naturalist is able to convince the artist that nature does not care twopence whether the "fittest" survives or not so long as what is best in the end prevails, that nature has a distinct end in view, then the heart of the artist will warm to the heart of nature, and every beauty he has seen in flower, bird or man will be a hundredfold increased. The following chapters combine exposition of the naturalist's belief in the inherent goodness of nature with the artist's portrayal of her beauty recognized only as the outgrowth of harmony and love.

The reader, as he finishes the book, is reminded of Ernest, the hero of Hawthorne's story, "The Great Stone Face." The author so seeks a "Naturalist-Artist, a combination of Julian Greenfell and Darwin," to convince mankind that nature is kind and gracious at heart, and therefore to be loved. The reader cries out: "Sir Francis Younghusband is himself the Naturalist-Artist!"

E. T. TAGGART.

SIR FRANCIS YOUNGHUSBAND. *The Heart of Nature.* E. P. Dutton & Co. 1922.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"SKYLINE CAMPS." A book attractive in binding, restful in type and extremely satisfying in content is this latest book of the out-of-doors, "Skyline Camps," by Walter Prichard Eaton. It is in reality a compilation of notes on Western scenic spots with a diverting interlude on the "Hills of Home." Illustrations are by Fred H. Kiser.

A chapter devoted to Glacier Park shows at once the writer's exact knowledge and keen appreciation of geology and botany and his real love for the high and open places. Glacial cirques, continental divides and winding trails become intimate as we read. Sounds, smells and color add the unusual touch to the familiar pictures. With the author, we too, are glad that St. Mary Lake "was named so beautifully that no one since has dared re-christen it Lake McSweeney or Lake Bill Johnson."

The paragraphs on how to build a trail offer sensible, practical suggestions that might profitably be followed even by those who consider themselves masters of technique in that respect.

We travel with the writer to Lake Chelan with its unique approach and overshadowing peaks, then on to the "Bluest Lake in the World," and to Bend, "the little city that takes itself seriously." With him, too, we enthuse over the forests of Douglas fir with the tiny flower gardens at their feet, or we thrill to the view of Mt. Hood, "the white temple of Oregon's gods, the Fuji of America."

Anyone who enjoys the smell of a camp-fire, the song of a hermit thrush, or that delicious weariness that follows a day of long trails, will read eagerly every word of this book with the keenest pleasure. The true mountaineer will agree with the author when he says:

"No mountain should have a road to the summit; it should be conquered on foot or not at all He who cannot, or will not, climb does not deserve the freedom of the peak."

LAURA H. PETERSON.

WALTER PRICHARD EATON. *Skyline Camps.* W. A. Wilde Company. 1922.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"THE DRAMA OF THE FORESTS." In this book of romance and adventure, the author depicts life as he has known it in northern Canada during the fur-trade days. The information gathered during a period of thirty-three years is written into a continuous narrative as though it all happened in a single year.

The principal character in the story is Oo-koo-hoo, chief of the Obijways, with whom the author spends this wonderful year, going with the chief and his family into the north Canadian woods on their trapping expedition.

Much information is given about the life and habits of animals and the various ways of trapping them. Many comparisons are made between the men of the north woods and "civilized men," much to the disparagement of the latter.

The romance which is cleverly woven into the pages of adventure holds the attention to the very end, and then closes, as all books of romance should, in the eventual happiness of the hero and heroine.

The book contains fourteen very unusual illustrations, attractive not only as to subject, but alluring in color tone and lights; reproductions from a series of paintings owned by the Royal Ontario Museum.

Altogether the book is intensely interesting and compels one to read to the very last word

ELIZABETH FITZ.

ARTHUR HEMING. *The Drama of the Forests.* Doubleday, Page & Co. 1921.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"ALPINE SKI-ING AT ALL HEIGHTS AND SEASONS." Can you stand on your feet and think? You think so. Can you stand on your feet and slide? You think so—until you try sliding on your first pair of runaway skis. The author of this book, an experienced mountaineer, tells how to do it; how to practice, how to avoid a fall, how to make a turn, and how to stop.

Similar to youngsters coasting on hand-sleds, he would have all mountain climbers equip themselves with skis, so that no matter how hard the upward journey may be, there is always the vision of rest, pleasure and comfort on the return trip. A trip that the expert makes in about as many minutes as were the hours required in ascent.

The author frankly admits that one of the chief objects of the book is to create a desire in the hearts of all foot climbers to become ski-runners. It is a sequel to "Cross-Country Ski-ing," by the same author, and while ski-ing is the chief subject under discussion, there is much of interest and information to foot climbing mountaineers.

A chapter on snow avalanches, when and where to expect one and how to avoid it, treats the subject in a readable manner, and his study of the different conditions of snow is very thorough. As a means of safety, as well as pleasure, he would have you know, at a glance, new snow from old snow, powder snow, granular, hard, soft, marble crust, trap crust, safe and unsafe snow bridges.

JENNIE HUNTER.

ARNOLD LUNN. *Alpine Ski-ing at All Heights. and Seasons.* E. P. Dutton & Co. 1921.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"Minds and Manners of Wild Animals."

In "Minds and Manners of Wild Animals," W. F. Hornaday has given us in a most interesting manner the results of his observations of wild animals, both in their native habitat and in captivity. As director of the Zoological Park in New York for many years he had unusual opportunities for studying the psychology of animals from all parts of the world, and his book proves that he made the most of them.

The keynote of the book is a sympathetic insight into the mental processes of the so-called lower animals.

Those persons who always inwardly rebelled at the theory that animals were guided solely by blind instinct, will hail this book with delight. Mr. Hornaday believes that most animals, particularly the primates, bears, elephants, beavers, members of the wolf family, and even the despised rat, have reasoning powers of no mean order. He gives numerous incidents to prove his contention, showing the clever manner in which they work out their individual and group problems and adapt themselves to new and unusual environment.

Among the numerous delightfully told stories of the primates, the most amazing is that of Dohong, a three-year-old orang, who discovered the use of the lever as a mechanical force, and joyfully applied his inventive genius to a campaign of cage-wrecking performances, highly satisfactory to himself but exasperating to the keepers. Mr. Hornaday asserts that Dohong's discovery was made as fairly as Archimedes' discovery of the principle of the screw.

The feathered tribes come in for their share of appreciation. A most interesting contrast is drawn between the intelligence and ability of the oriole and various communal nest builders to provide adequate homes for themselves and the utter failure of the Fuegian Indians to evolve any kind of shelter. His conclusion is that the stock of ideas possessed by a group of highly-endowed birds would equal, if not surpass, those of the Fuegians, Jacksons of the Malay Peninsula, or Poonans of Central Borneo.

The discussions on fear, morals, courage, combats, and criminals are extremely interesting—oftentimes thrilling—and show most amazingly parallels with the genus homo.

Throughout the book it is made very evident that the author considers the highest animals superior in mind and morals to the lowest grades of the human race.

M. D. Donohue.

W. T. Hornaday. *Minds and Manners of Wild Animals.* Scribners. 1922.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

Associated Mountaineering Clubs of North America

This organization is now in its seventh year of work. It includes not only all of the leading mountaineering and outdoor clubs of the country, but also many societies and institutions interested in conservation. The common bond is work for the creation, development and protection of national parks and forests.

The secretary of the Bureau, Mr. Le Roy Jeffers, 475 Fifth Avenue, New York, has gathered in the New York Public Library a large collection of the literature of mountaineering and of views of mountain regions throughout the world, in this way centralizing information on mountaineering activities. He has secured much publicity in magazines and newspapers for our finest, and often

comparatively little known, scenic regions; and he is giving illustrated lectures on mountaineering and on American and Canadian scenery. An annual bulletin of the Association is published, which includes the officers of the various clubs and societies belonging to the Bureau, their activities, outings, etc.

The Association comprises the following clubs and societies:

American Alpine Club, Philadelphia and New York.
American Civic Association, Washington.
American Forestry Association, Washington.
American Game Protective Association, New York.
American Museum of Natural History, New York.
American Scenic and Historic Preservation Society, New York.
Adirondack Camp and Trail Club, Lake Placid Club, N. Y.
Adirondack Mountain Club, Albany, N. Y.
Appalachian Mountain Club, Boston and New York.
Boone and Crocket Club, New York.
British Columbia Mountaineering Club, Vancouver.
California Academy of Sciences, San Francisco.
California Alpine Club, San Francisco.
Camp Directors' Association of America, New York.
Canadian National Parks, Department of Interioe, Ottawa.
Cascadians, Yakima, Wash.
Colorado Mountain Club, Denver.
Co-operative Campers of the Pacific Northwest, Seattle.
Ecological Society of America, Decatur, Ill.
Field and Forest Club, Boston.
Fresh Air Club, New York.
Geographic Society of Chicago.
Geographical Society of Philadelphia.
Green Mountain Club, Inc., Rutland, Vermont.
Hawaiian Trail and Mountain Club, Honolulu.
Inkowa Club, New York.
Klahhane Club, Port Angeles, Wash.
League of Walkers, New York.
Mazamas, Portland, Ore.
Mountaineers, Seattle and Tacoma.
National Association of Audubon Societies, New York.
National Forestry Program Committee, New York.
National Park Service, U. S. Dept. of Interior, Washington.
National Parks Association, Washington.
National Parks Committee, New York.
National Parks Association, Seattle.
New York Zoological Society, New York.
Olympians, Hoquiam, Wash.
Palisades Interstate Park Commission, New York.
Pennsylvania Alpine Club, Altoona, Pa.
Prairie Club, Chicago.
Rocky Mountain Climbers' Club, Boulder, Colo.
Sagebrush and Pine Club, Yakima, Wash.
Save the Redwoods League, Berkeley, Cal.
Sierra Club, San Francisco and Los Angeles.
Society for the Protection of Native Plants, Boston.
Society for the Protection of Native New England Plants, Boston.
Trails Club of Oregon, Portland.
Tramp and Trail Club, New York.
Travel Club of America, New York.
Wild Flower Preservation Society of America, New York.

Report of the Certified Public Accountant Who Examined the Financial Affairs of the Mazamas

INCOME AND PROFIT & LOSS ACCOUNT

For the Period from October 3, 1921, to October 10, 1922

INCOME:			
Members' Dues			$1,947.00
Miscellaneous:			
Interest on Liberty Bonds		$ 34.17	
Interest on Savings Deposit		94.33	
Key Sales		10.00	
Sundry		3.75	142.25
			$2,089.25
Less Net Loss from Committee Transactions:			
Losses:			
Mazama Magazine		891.12	
Oregon Out of Doors Magazine		554.10	
Entertainment		55.14	
		$1,500.36	
Profits:			
Annual Outing—Three Sisters	$736.64		
Mt. Hood Outing	160.00		
Paradise Park Outing	60.13		
Local Walks	89.29	1,046.06	454.30
Gross Income			$1,634.95
EXPENSES:			
Club Room Rent		$ 642.00	
Telephone Service		99.75	
Printing and Stationery—General		235.36	
Associated Club Dues		15.00	
Insurance		40.13	
Furniture Repairing		30.00	
Keys		6.00	
Monument on Mt. Rainier		96.00	
Wood on Larch Mountain		25.00	
Moving Picture Machine		75.00	
Sundry		45.74	1,309.98
Net Income			$ 324.97

BALANCE SHEET

As at October 10, 1922

Assets

Cash in Banks:		
General Funds	$2,541.73	
Savings Fund	3,379.40	$5,921.13
United States Liberty Bonds		700.00
Club Room Furniture, Library and Camp Equipment		1,000.00
		$7,621.13

Liabilities and Net Work

Liabilities	None
Surplus	$7,621.13
	$7,621.13

CERTIFICATE OF AUDITOR

Portland, Oregon, November 6, 1922.

The Mazama Council,
Portland, Oregon.

In accordance with your instructions, I have audited the account of the Mazamas of Portland, Oregon, for the fiscal year ended October 10, 1922, and now submit my report thereon.

After meeting all current expenses the operations of the Mazamas for the period under review resulted in a net income of $324.97. Particulars are given in the accompanying Profit & Loss Account. The Balance Sheet on this page represents the financial condition of the Club as at October 10, 1922.

Certificates were received direct from the banks in verification of the cash funds. The United States Liberty Bonds were inspected. The club room furniture, library and camp equipment is covered by $1,500.00 fire insurance.

The accounts of the Treasurer and the various committees were examined and found to be in order.

Yours truly,

Robert F. Riseling,
Certified Public Accountant.

Mazama Organization for the Year 1922-23

President.....RICHARD W. MONTAGUE
Vice-President.....ALFRED F. PARKER
Corresponding Secretary.....JAMIESON PARKER
Recording Secretary.....JAMES A. ORMANDY
Financial Secretary.....MARGARET A. GRIFFIN
Treasurer.....FRANK M. REDMAN
Historian.....LAURA H. PETERSON
Chairman of Outing Committee.....MARTHA E. NILSSON
Chairman Local Walks Committee.....W. P. FORMAN

COMMITTEES

Outing Committee—Martha E. Nilsson, Chairman; Chas. J. Merten, John A. Lee.

Local Walks Committee—W. P. Forman, Chairman; L. W. Waldorf, Dorothy S. Brownell, Elizabeth McKittrick, Joseph Bonneau.

Entertainment Committee—Harold V. Newlin, Chairman; Lindsley W. Ross, Minet Sherman, Velmalita Woolery, Kenneth W. Murfree.

Educational Committee—L. A. Nelson, Chairman; Elsa Grelle, T. R. Conway, Mary Gene Smith, Mrs. Harold V. Newlin.

Library Committee—Laura H. Peterson, Chairman; Buelah Miller Carl, Ella P. Roberts, Ruby Henry, Mary E. Powell.

Membership Promotion Committee—E. T. Valliant, Chairman; Marion Cummins, Martha Gasch.

Membership Committee—Alfred F. Parker, Chairman; Margaret A. Griffin, Frank M. Redman.

Publication Committee—Robert W. Osborn, Chairman; Geo. E. Matthews, Ella P. Roberts, M. W. Gorman, Albert W. Gentner, John R. Byers.

Auditing Committee—Robert F. Riseling, Chairman; Geo. W. Bissell, Louise Backus.

Lodge Committee—John A. Lee, Chairman; L. A. Nelson, R. L. Glisan.

Trails Committee—Clyde E. Carlos, Chairman; R. H. Bunnage, Lee Benedict.

Publicity Committee — Dorothy S. Brownell, Chairman; Harold S. Babb, Ellis R. Hawkins.

Scouting Committee—John D. Scott, Chairman; Arthur D. Platt, John R. Byers, Herbert I. Corning, Ralph M. Osvold.

Photographic Committee—W. W. Evans, Chairman; Walter Boychuk, Everett Philpoe, T. R. Conway, R. L. Glisan.

Report of Local Walks Committee

FOR YEAR OCTOBER 15, 1921, TO OCTOBER 1, 1922

Dates of Trip 1921	*Trip*	*Leader*	*No. Present*
Oct. 15-16	Mt. Hamilton	Frank M. Redman	30
Oct. 22-23	St. Peter's Dome-Yeon Mountain	Clyde E. Carlos	12
Oct. 29-30	Aschoff's	Local Walks Committee	80
Nov. 6	Rooster Rock-Bull Run	P. G. Payton	37
Nov. 13	Vancouver Mystery Trip	Gertrude Williams	117

Dates of Trip 1921	*Trip*	*Leader*	*No. Present*
Nov. 27	Bonneville	Frank M. Redman	30
Dec. 4	Oswego-Ladd Rock Quarry	M. Valliant	69
Dec. 11	Columbia Bottoms-Dairy Farms.	J. I. Teesdale	60
Dec. 18	Dundee, Mistletoe Trip	Jamieson Parker	70
Dec. 26	Whitwood Court	Letitia Wood	29
1922			
Jan. 8	Paper Chase	Harriett E. Monroe	114
Jan. 15	Multnomah County Rock Quarry	J. Homer Clark	89
Jan. 22	Angel's Rest-Wahkeena Falls	Clem Blakney	57
Jan. 29	Cedar Mill Trip	Minna Rider	49
Feb. 5	Oregon City-Coalca Pillar	Alfred F. Parker	67
Feb. 12	Arlington Heights	Mr. and Mrs. Verne Ketchum	43
Feb. 11-12	Mary's Peak	Gertrude Williams	27
Feb. 18-19	Larch Mountain	P. G. Payton	95
Feb. 26	Highway Butte	Martha Landis	40
Mar. 5	Clackamas Gorge	E. E. Burglund	17
Mar. 12	Kellogg Creek-Oatfield Hill	Winifred Smith	38
Mar. 19	Bull Mountain	W. W. Evans	14
Mar. 26	Chamberlain Hill	W. W. Widmer	55
April 2	Pete's Mountain	Lucy Woelfer	58
April 9	Oswego Lake Loop	Helen Hollister	104
April 16	Municipal Terminal	Martha E. Nilsson	40
April 23	Rocky Point	W. P. Forman	54
April 30	Bull Run	W. P. Hardesty	89
May 6-7	Trail Day--Eagle Creek	Trails Committee	45
May 14	Aschoff's	Entertainment Committee	59
May 20-21	Eagle Creek	Educational Committee	91
May 28	Washougal River	Carl Sakrison	26
June 4	Cougar Rock	Cora Howes	76
June 10-11	Wind River	Letitia Wood	87
June 18	Hillside Boulevard	Richard W. Montague	65
June 24	Saddle Mountain	Dorothy S. Brownell	38
July 1-4	Paradise Park	Mr. and Mrs. John A. Lee	65
July 8-9	Battle Ground	J. M. Roberts	64
July 16	Mt. Hood	Frank M. Redman	85
July 22-23	Buzzard's Cave	Clyde E. Carlos	47
July 29-30	Vancouver Lake	Gertrude Williams	76
Aug. 12-13	Molalla River	Carl Sakrison	13
Aug. 27	Wauna Point	R. H. Bunnage	20
Sept. 3-4	Wildcat Mountain	Marie Koennecke	27
Sept. 9-10	Mayberry	Susanna Kellett	29
Sept. 16-17	Table Mountain	Maudileen Wilson	31
Sept. 23-24	Tanner Creek	Frank M. Redman	29
Oct. 1	Champoeg	W. P. Forman	61

Respectfully submitted,

FRANK M. REDMAN, *Chairman.*

Membership

Address is Portland, Oregon, Unless Otherwise Designated

ACHESON, THOMAS J., 800 Securities Bldg., Seattle, Wash.
ACTON, HARRY W., 519 W. 121st St., New York, N. Y.
ACTON, MRS. HARRY W., 519 W. 121st St., New York, N. Y.
ADAMS, W. CLAUDE, 1208 Selling Bldg.
AGEE, LEONARD, 610 Harney Ave.
AINSWORTH, KATHERINE, Hawthorne Terrace.
AITCHISON, CLYDE B., Interstate Commerce Commission, Washington, D. C.
AKIN, OTIS F., 919 Corbett Bldg.
ALLISON, J. E., 1911 Columbia St., Eugene, Ore.
ALLPHIN, WILLARD, 353½ Williams Ave.
ALMY, LOUISE, Dillon, Mont.
ALSLEBEN, IDA M., 122 E. 39th St. S., Box 427.
ALTSTADT, HERBERT, 324 19th St.
AMOS, WILLIAM F., 1016 Selling Bldg.
ANDERSON, DOROTHY, 314 E. 33rd St.
ANDERSON LEROY, 645 North Central Ave., Glendale, Cal.
ANDERSON, WILLIAM H., 4464 Fremont Ave., Seattle, Wash.
ANSLEY, J. W., 1115 Senate St.
APPLEDATE, ELMER I., Box 236, Klamath Falls, Ore.
ARNSPIGER, MRS. STELLA, 6401 89th St. S. E.
ASCHOFF, ADOLF, Marmot, Ore.
ATKINSON, R. H., 422 Oregon Bldg.
AUER, TILLIE H., Y. W. C. A.
AYER, LEROY JR., R. F. D. 2, Box 20, Milwaukie, Ore.
AYER, ROY W., 409 11th St.

BABB, HAROLD S., 29 Oregon Yacht Club, River Route, Milwaukie, Ore.
BACKUS, LOUISE, 753 E. Main St.
BAILEY, A. A. JR., 753 E. Main St
BAILEY, A. A. JR., 644 E. Ash St.
BAILEY, L. D., 3911 E. 42d St.
BAILEY, VERNON, 1834 Kalorama Ave., Washington, D. C.
BALLOU, O. B., 10th at Flanders St.
BALMANNO, JACK H., Multnomah, Ore.
BANFIELD, ALICE, 570 E. Ash St.
BARBEE, C. M., 909 Stevens Bldg.
BARCK, C., 205 Humboldt Bldg., St. Louis, Mo.
BARNUM, W. H., 233 Lake Shore Ter., Los Angeles, Cal.
BARRINGER, ALICE, 145 E. 43d St. N.
BEATTIE, BYRON J., 830 Rodney Ave.
BENDA, ANNE J., 170 11th St.
BENEDICT, ETHEL, 185 E. 87th St. N.
BENEDICT, LEE, 185 E. 87th St. N.
BENEDICT, MAE, 185 E. 87th St. N.
BENNETT, ELLA, 1042 Macadam St.
BIDWELL, EDMUND, 701 Corbett Bldg.
BIGGS, ROSCOE, 245 E. 46th St.
BILES, JESSIE, Pender, Neb.
BILLMEYER, MARY P., 642 Court Hse.
BJORKLUND, ERIC, 870 Albina Ave.
BJORKLUND, MRS. ERIC, 870 Albina Ave.
BLACKWOOD, E. C., 386 Morrison St.
BLAKNEY, C. E., R. F. D. 1, Sherwood, Ore.
BLAKNEY, MRS. C. E., R. F. D. 1, Sherwood, Ore.
BLUE, WALTER, 1310 E. 32d St.
BLUME, LENA, 385 11th St.
BONES, THOMAS J., 8412 49th Ave. S. E.
BONNEAU, JOE O., 869 Garfield Ave.
BOWERS, NATHAN A., 531 Rialto Bldg. San Francisco, Cal.
BOWIE, MARGARET, 297 E. 35th St.
BOWLAND, FRANCES L., 620 12th St., Oregon City, Ore.
BOWLAND, JESSIE M., 620 12th St., Oregon City, Ore.
BOYCE, EDWARD, 207 St. Clair St.
BOYCHUK, WALTER, 166 Nebraska St.
BRAGG, JESSIE C., 287 Stark St.
BRANDBERG, EVA M., 284 E. 73d St. N.
BRENNAN, THERESA, 265 14th St.
BREWSTER, WM. L., 1022 Gasco Bldg.
BRONAUGH, JERRY ENGLAND, Gasco Bldg.
BROWN, ALBERT STANHOPE, 110 W. 40th St., New York, N. Y.
BROWN, EYLER, 1390 Emerald St., Eugene, Ore.
BROWN, G. T., 500 E. Morrison St.
BROWNELL, DOROTHY S., 1501 E. Taylor St.
BROWNELL, H. H., Almira Apts.
BRUNELL, EVA, 18 Abbott St., Worcester, Mass.
BUCK, C. J., 549 E. 39th St. N.
BUCKMAN, WILLIAMSON, 102 N. Clinton Ave., Trenton, N. J.

Bullivant, Anna, 269 13th St.
Bunnage, R. H., 1548 E. 29th St. S.
Bunnage, Mrs. R. H., 1548 E. 29th St. S.
Burce, Jessie M., 181 Rutland Ter.
Burglund, E. E., 1033 E. Alder St.
Buse, Walter F., 52 Holgate Moorage.
Buse, Mrs. Walter F., 52 Holgate Moorage.
Bush, J. C., R. F. D. 4, Box 506.
Byers, John R., 990 Council Crest Drive.

Calhoun, Mrs. Harriet S., 367 E. 34th St.
Calverley, Robert V., R. F. D. 3, Box 85, Oregon City, Ore.
Campbell, Agnes, Monmouth, Ore.
Campbell, David, 654 Everett St.
Campbell, Grace, 117 E. 55th St.
Campbell, P. L., 1170 13th Ave. E., Eugene, Ore.
Carl, Mrs. Beulah Miller, 1172 Minnesota Ave.
Carlos, Clyde B., 1355 Sandy Blvd.
Carr, Lulu B., 5603 W. 8th St., Duluth, Minn.
Cary, Leroy N., Western Pine Mfrs. Assn., 510 Yeon Bldg.
Case, Wm. Moll, 1040 Pearl St., Eugene, Ore.
Chase, Ethyl P., 520 Davenport St.
Chase, J. Weston, 507 Gasco Bldg.
Chastain, Ernsyl F., Olds, Wortman & King.
Cheney, W. C., Box 551, Tillamook, Ore.
Chenoweth, May, 104 N. E. 24th St.
Chord, Jack T., 155 E. 15th St.
Chord, Marie H., 155 E. 15th St.
Christianson, Wm. D., 147 Dundas St., London, Ont.
Churchill, Arthur M., 812 N. W. Bank Bldg.
Clark, Carolyn S., 347 Wheeler St.
Clark, F. N., 509 Wilcox Bldg.
Clark, J. Homer, 92 Front St.
Clarke, Mrs. Auril Keeler, Route A, Box 106, Eugene, Ore.
Clarke, Ray H., 87-89 Front St.
Clarke, Warren G., Route A, Box 106, Eugene, Ore.
Clodfelter, Vivian Lucille, 1221 E. Madison St.
Colburn, Mrs. Avis Edwards, Box 33, Clovis, N. Mex.
Cole, Mrs. H. W., 435 E. Everett St.
Collins, W. G., 510 32d Ave. S., Seattle, Wash.
Colpitts, Marguerite, Box 2990, Honolulu, H. I.
Conrad, A. J., 809 E. 76th St. N.
Conrad, Diana, 811 Spitzer Bldg., Toledo, Ohio
Conrad, Rose, R. F. D. 1, Box 8, Grabill, Ind.
Conway, Harry, 1727 E. Yamhill St.
Conway, T. Raymond, 608 Schuyler St.
Cook, Dorothy E., Public Library, E. Cleveland, Ohio.
Cook, Vera E., 1798 Woolsey St.
Cooke, Maude W., 163 12th St.
Cooper, M. A., 664 E. Pine St.
Corning, H. I., 255 Cherry St.
Corning, Mrs. H. I., 255 Cherry St
Coursen, Edgae E., 658 Lovejoy St
*Coville, F. V., Dept. of Agriculture, Washington, D. C.
Cowan, Earl, 693 E. Couch St.
Cowperthwaite, Julia, 580 1st St.
Crout, Nelle C., 1326 E. Tillamook St.
Cruickshank, Ruby, 452 E. 14th St. N.
Cummins, Marion L., 1141 Carlton Ave.
Currier, Geo. H., P. O. Box 526, Phoenix, Ariz.
*Curtis, Edward S., 614 2d Ave., Seattle, Wash.
Cushing, Mildred, 3 Rose-Friend Apts.
Cushman, Clyde H., 1064 E. 15th St. N.
Cutting, Ruth, 240 E. 16th St.

Dahl, Philip H., 405 Jefferson St.
Davidson, Earl N., P. O. Box 2057.
Davidson, R. J., 701 E. 60th St. N.
Day, Bessie, 690 Olive St., Eugene, Ore.
De Carie, Anna E. M., 786 Kerby St.
De Lacy, Beatrice. 11 Buena Vista Park, Cambridge, Mass.
Deute, W. L., 1249 Rodney Ave.
Deutsch, Gertrude E., 404 Fargo St.
Dick, Stewart, Allen & Lewis Co.
*Diller, Jos. S., U. S. Geological Survey, Washington, D. C.
Dillinger, Mrs. C. E., 547 E. 39th St.
Dimitry, Theodore, 314 Macleay Bldg.
Donald, Kathryn, 1335 Clay St., San Francisco, Cal.
Donohoe, Mary D., 375 16th St.
Dowling, Colista M., 742 Belmont St.

DOWLING, EUGENE H., 742 Belmont St.
DUDLEY, ALEXANDER P., 171 E. 24th St. N.
DUDLEY, MRS. ALEXANDER P., 171 E. 24th St. N.
DUFFY, MARGARET C., 467 E. 12th St.
DYER, R. L., 919 Madison St., Seattle, Wash.

EDWARDS, ALICE L., Dept. of Home Economics, Rhode Island State College, Kingston, R. I.
ELLIS, H. C., 105 Greeley Ave., Bend, Ore.
EMMRICH, ARTHUR J., 531 E. 61st St.
ERREN, H. W., 285 Ross St.
ESTEN, SIDNEY R., 301 W. 9th St., Anderson, Ind.
ESTES, MARGARET P., 692 E. 43d St. N.
EVANS, W. W., 744 Montgomery Dr.
EVANS, MRS. W. W., 744 Montgomery Drive.
EVANSON, ARTHUR H., Meier & Frank Co.
EVERSON, FRED L., 1313 W. 8th St., Los Angeles, Cal.
EVON, GENEVIEVE, Box 561, Gladstone, Ore.

FAGSTAD, THOR., 443 Broadway.
FALLMAN, NINA A., Congress Hotel.
FARR, AMY V., 321 Custom House.
FARRELL, THOS. G., 328 E. 25th St.
FARRELLY, JANE A., 1072 E. 29th St. N.
FILLOON, R. M., U. S. Forest Service.
FINLEY, IRENE, Jennings Lodge.
FINLEY, WILLIAM L., Jennings Lodge.
FISH, ELMA L., 473 N. E. 45th St.
FITZ, ELIZABETH, Madison Park Apts.
FLEMING, MARGARET A., P. O. Box 479.
FORD, GAINES L., United Contracting Co., 109 N. W. Bank Bldg.
FORDYCE, C. P., 1701 Stone St., Falls City, Neb.
FORMAN, W. P., 128 N. 18th St.
FORSYTH, JAMES R., 1028 Williams Ave.
FOSTER, FORREST L., 354 E. 49th St. S. E.
FOSTER, W. C., 224 Glenn Ave.
FOWLER, MARCELLA A., 94 6th St.
FRAGMEIER, FREDA, 335 19th St.
FRANKLIN, F. G., Willamette University, Salem, Ore.
FRANING, ELEANOR, 1119 N. Broad St., Galesburg, Ill.
FRAZER, KENNETH F., 1501 Yeon Bldg.
FREED, H. A., 697 Marshall St.
FRENCH, S. H. J., Campbell Hotel.
FRIES, SAMUEL M., 691 Flanders St.
FRITSCH, LOUIS, 283 13th St.
FUHR, LILLIAN L., 299 E. Lombard St.
FULLER, HOWARD A., 717 Spring St., Seattle, Wash.
FULLER, FRANK, R. F. D. 1, Sulphur Springs, Alberta, Can.
FULLER, MARGARET E., 1873 E. Salmon St.

GARDNER, HARRY W., 30 N. 20th St.
GARDNER, MRS. HARRY W., 30 N. 20th St.
GARDNER, BERNICE J., Cambrian Apts., 433 Columbia St.
GASCH, MARTHA M., 9 E. 15th St. N.
GENTNER, ALBERT W., Pittock Block.
GERBER, MRS. LAURA S., Route 1, Box 3, Milwaukie, Ore.
GIESECKE, F., 289 Yamhill St.
GILBERT, CLARENCE H., 830 Clackamas St.
GILBERT, HAROLD S., 384 Yamhill St.
GILBERTSON, MARTHA, 730 Irving St.
GILBERTSON, NAOMI, 730 Irving St.
GILE, ELEANOR, 622 Kearney St.
GILMOUR, W. A., P. O. Drawer 731.
GLEYRE, MRS. ELSIE M., 1639 E. 9th St., Pueblo, Colo.
GLISAN, RODNEY L., 612 Spalding Bldg.
GODDARD, A. V., 503 E. Ankeny St.
GOLDAPP, MARTHA OLGA, 454 Mason St.
**GORMAN, M. W., 221 13th St.
GRAF, S. H., 306 S. 8th St., Corvallis, Ore.
GRASSL, MRS. CLARLES W., 547 E. 39th St.
GRAVES, C. E., Route 3, Hood River, Ore.
*GREELEY, GEN. A. W., Center Conway, Gen. Del., New Hampshire.
GRELLE, ELSA, 895 Northrup St.
GRENFELL, MRS. W. R., 221 E. 21st St. N.
GRIESEL, MRS. W. F., Seaside, Ore.
GRIFFIN, LOTTA. Box 665, Watertown, S. D.
GRIFFIN, MARGARET A., 814 Spalding Bldg.
GRIFFITH, B. W., 417 Boyd St., Los Angeles, Cal.
GUNNER, EDITH M., 514 Vista Ave.
GUNSTER, MRS. KARL, Abstract Dep., Court House.
HABBE, JOHN F., 704 Fletcher Trust Bldg., Indianapolis, Ind.

HAFFENDEN, A. H. S., Portland Van & Storage Co., 15th and Kearney Sts.
HAGER, R. H., 137 N. 27th St.
HALL, HARRY B., 1840 E. Glisan St.
HALVORSEN, MILDRED, 255 N. 21st St.
HANCOCK, A. W., 92 E. 69th St. N.
HANSEN, BESSIE L., 577 Kerby St.
HANSEN, RUTH E., 577 Kerby St.
HARDESTY, WM. P., 617 Chamber of Commerce Bldg.
HARLAN, EDWARD G., University Club Tacoma, Wash.
HARPER, IRA H., 2801 H St., Vancouver, Wash.
HARPER, MRS. IRA H., 8201 H St., Vancouver, Wash.
HARPER, ROBERT F., 210 11th St.
HARROUN, NORMAN, 400 Monroe St.
HARTNESS, GEORGE, 671 Clackamas St.
HARVEY, GEORGE H. JR., 3120 W. 23rd Ave., Denver, Colo.
HAUGEN, MRS. OSCAR S., Oregon Yacht Club, House 1.
HAWKINS, E. R., 423 E. 24th St. N.
HAWLEY, J. M., Box 542, Seaside,Ore.
HAYES, HARRY G., McKenzie Bridge, Ore.
HAYHURST, C. W., 240 Stark St.
HAZARD, JOSEPH T., Box 234, Seattle, Wash.
HAZEN, TODD, 602 Wilcox Bldg.
HEDENE, PAUL F., 720 E. 22d St. N.
HEITMEYER, ADDA, 502 E. 51st St. N.
HEIZER, NELLE, 790 Gantenbein Ave.
HELM, JEAN, 516 Patton Road.
HELSBY, BEATRICE, 304 S. High St., Oregon City, Ore.
HEMPY, M. RAYMOND, M. A. A. C.
HENDERSON, G. P., 1155 E. Yamhill St.
HENDRICKSON, FAY, 360 N. Capitol St., Salem, Ore.
HENDRICKSON, J. HUNT, 610-611 Spalding Bldg.
HENKEL, FRED C., 273 Grand Ave.
HENRY, EARLE G., Newberg, Ore.
HENRY, LEONA, 809 E. 76th St. N.
HENRY, RUBY V., 809 E. 76th St. N.
HENTHORNE, MARY C., 315 11th St.
HENTHORNE, ORIL ELSIE, 315 11th St.
HERMANN, HELEN M., 965 Kerby St.
HERREN, PAUL A., 636 E. 17th St. N.
HEWITSON, JOHN ROSS, 929 Gantenbein Abe.
HIBBARD, WAYNE E., 213 Tilford Bldg.
HIGH, AUGUSTUS, Box 648.
HILTON, FRANK, 426 N. W. Bank Bldg.
HIMES, GEORGE H., Auditorium.
HINE, A. R., 955 E. Taylor St.
HOCKINSON, N. R., 339 Hancock St.
HODGSON, CASPER W., Rockland Ave., Park Hill, Yonkers, N. Y.
HOFF, CLARICE L., 1419½ E. Northlake Ave., Seattle, Wash.
HOGAN, CLARENCE, 862 E. 32d St. N.
HOLCOMBE, GLENNA, 434 Larrabee St.
HOLLAND, MARVIN K., 1410 Yeon Bldg.
HOLLISTER, HELEN, Ladd & Tilton Bank.
HOLMES, EDWIN L., 1506 Yeon Bldg.
HOLMAN, F. C., Mercantile Trust Co., 1 Grant Ave., San Francisco, Cal.
HOPKINS, FRANCES, 465 Tacoma Ave.
HOPPER, ELIZABETH N., 1010 Selling Bldg.
HOSKINS, NAOMI, Bend, Ore.
HOWES, CORA M., 628 Montgomery Drive.
HOWLAND, LUTHER H., Selling Blng.
HUNTER, JENNIE, 790 Gantenbein Ave.
HUTCHINSON, HAROLD THOMAS, 41 Trinity Place.
HUTCHINSON, ROBERT P., Hood River, Ore.

INGHAM, FLORENCE, 1181 Harold St.
INGHAM, THEODORE, 1181 Harold St.
IMHAUS, N. E., 262 Park St.
IVANAKEFF, PASHO, 246 Clackamas St.

JAEGER, J. P., 131 6th St.
JAENICKE, A. J., U. S. Forest Service.
JAMES, NEILL, Cottage 21, Oceanview Court, Waikiki Beach, Honolulu, H. T.
JENNER, SELMA, 335 14th St.
JENSMA, MARTHA, 123 E. 29th St. N.
JEPPESEN, ALICE, 891 Albina Ave.
JOHNSON, ALICE M., 2611 62d St. E.S.
JOHNSON, FRED J., 2145 Hassalo St.
JONES, F. I., 307 Davis St.
JOYCE, ALICE V., College of Agriculture, University Station, Tucson, Ariz.

KACH, F. G., care Robert Kach, Box 3971.
KALTENBACH, ELSIE, R. F. D. 1, Milwaukie, Ore.
KARLSON, RUTH C., 143 E. 33d St.
KELLETT, SUSANNA, 871 E. Madison St.
KELSEY, JOHN R., 228 10th St.

KERR, D. T., 556 Morgan Bldg.
KETCHUM, VERNE L., 4920 82d St.
KIMMEY, PAUL C., 140 N. 16th St.
KING, A. E., 617 Salmon St.
KING, MYRTLE, Canby, Ore.
KNOWLTON, DOROTHY, 571 Elm St.
KOEHLER, K. H., care Eastern & Western Lbr. Co.
KOENNECKE, MARIE, 1278 Williams Ave.
KREGNESS, MARY M., 400 N. 25th St.
KRESS, CHARLOTTE, 1102 Vinton Bld., Detroit, Mich.
KROHN, ROBERT, 311 E. 22nd St.
KRUMREY, ANNA M., 380 10th St.
KRUSE, JOHANNA, R. F. D. 4.
KUENEKE, ALMA R., 869 Clinton St.
KUHN, WAYNE E., 175 W. Sumner St.
KUNKEL, HARRIET, 510 Luzerne Apts., Pine and Boren Sts., Seattle, Wash.
KUNKEL, KATHERINE, 409 N. W. Bank Bldg.

LABHART, C. W., 837 N. W. Bank Bldg.
LABHART, MRS. C. W., 666 Glisan St.
LADD, HENRY A., care Ladd & Tilton Bank.
LADD, WILLIAM M., care Ladd & Tilton Bank.
LA MADE, ERIC, Couch Bldg.
LANCASTER, CHRISTINE. 395 E. 45th St. N.
LANDIS, MARTHA, 2019 E. Main St.
LAUBACH, LEONA M., Gen. Del., Spokane, Wash.
LAWFFER, G. A. United Contracting Co., 109 N. W. Bank Bldg.
LEACH, JOHN R., 6616 Foster Road.
LEE, FAIRMAN B., 1217 6th Ave. W., Seattle, Wash.
LEE, JOHN A., 1219 Spalding Bldg.
LEE, MARY KNAPP, 1089 Westover Drive.
LEITNER, EMMA, 130 E. 55th St.
LESLIE, MAUD CURTIS, 184 W. Wevster St.
LETZ, JACQUES, Oregon Camera Club.
LEVE, WALTER H., U. S. Forest Service.
LEWIS, CLYDE E., 733 E. 42d St. N.
LEWIS, L. C., 742 N. E. 65th St.
LEWIS, LUCY M., 105 N. 21st St., Corvallis, Ore.
LIBBY, HARRY C., 422 E. Stanton St.
LOGGAN, CHAS. F., 461 Davis St.
LOUCKS, ETHEL MAE, 355 E. 8th St.
LUETTERS, F. P., 133 Vine St., Roselle, N. J.
LUND, WALTER, 191 Grand Ave. N.
LUTHER, C. V., 410-6 Selling Bldg.

MCARTHUR, LEWIS A., 561 Hawthorne Terrace.
MCBRIDE, AGNES, P. O.383, Oswego, Ore.
MCCLAIN, M. F., Eugene, Ore.
MCCOY, SALLIE E., P. O. 627, Boise, Ida.
MCCREADY, SUE O., 402 E. 16th St., Vancouver, Wash.
MCCULLOCH, CHARLES E., 1410 Yeon Bldg.
MCDONALD, MRS. LAURA H., 354 E. 49th St. S.
MCELROY, FLORENCE, 954 Gladstone Ave.
MCGILVRA, C. T., 289 E. 47th St.
MCISAAC, R. J., Parkdale, Ore.
MCKALSON, FLOYD E., 929 Montana Ave.
MCKAUGHAN, HENRIETTA, care The Journal.
MCKITTRICK, ELIZABETH, 723 Cahmber of Commerce Bldg.
MCLAUGHLIN, SADIE, 648 Kline St.
MCNEIL, FRED H., care The Chronicle Pub. Co., The Dalles, Ore.
MCNEIL, FLORENCE J., Central Library.

MACGREGOR, RUTH, 1404 Mears St.
MAAS, ALFRED T., 568 E. 10th St.
MAHIN, DORA C., 1118 E. 30th St. N.
MANLY, M. W., 45 4th St.
MARBLE, W. B., 29 E. Madison St., Chicago, Ill.
MARCOTTE, HENRY, 218 E. 56th St., Kansas City, Mo.
MARSH, MRS. HAROLD D., Apt. 29, Brown Apts.
MARSH, MRS. J. W., Underwood, Wn.
MARSHALL, A. H., 503 W. 13th St., Vancouver, Wash.
MASON, ELLA SABINA, 409 Salmon St.
MATTHEWS, MRS. ELLA, 660 E. 59th St. N.
MATTHEWS, GEO. E., 660 E. 59th St. N.
MATTHEWS, MRS. LILLIAN M., 1207 Campbell St.
MATHIS, C. J., 5th and Morrison Sts.
MATTLEY, MAUD, Oregon City, Ore.
MEARS, S. M., 721 Flanders St.
MEISSNER, LILLIE, 350 Marguerite Ave.
MEREDITH, MRS. C. M., 712 Washington St.
MEREDITH, DAISEY LORENA, 263 Miles St.
MEREDITH, GEORGE, 11th and Burnside Sts.

MEREDITH, HELEN E., 712 Washington St.
MERTEN, CHARLES J., 307 Davis St.
*MERRIAM, HART E., 1919 16th St. N. W., Washington, D. C.
MEYERS, C. I., 695 Milwaukie St.
MILES, SANFORD, 55 Halley St., Brockport, N. Y.
MONROE, ANNE SHANNON, 5906 42d St. S. E.
MONROE, HARRIETT E., 1431 E. Salmon St.
MONTAGUE, JACK R., 1310 Yeon Bldg.
MONTAGUE, RICHARD W., 1310 Yeon Bldg.
MOORE, DUNCAN, 1303 Chamber of Commerce Bldg., Chicago, Ill.
MOORE, MERLE S., 785 Johnson St.
MORGAN, MRS. CHRISTINE M., Los Angeles, Cal.
MORGAN, MRS. GRANVILLE D., 1146 Williams Ave.
MORTENSEN, CARL J., 235 Taylor St.
MORTON, GRANT J., 518 Tabor Opera House Bldg., Denver, Color.
MORUD, MAGNUS A., 748 Lovejoy St.
MUELLHAUPT, OSCAR W. T., 407-409 U. S. Nat. Bank Bldg.
MULLIN, R. E., 206 E. 8th St., Vancouver, Wash.
MURFREE, KENNETH W., 609 Wells-Fargo Bldg.
MURRAY, W. J., 502 Telephone Bldg.

NEELS, CARL, 495 Jefferson St.
NELSON, BUELL C., 529 Yamhill St.
NELSON, ADAH, 1145 Ivon St.
NELSON, CLARA A., 816 N. Edison St.
NELSON, L. A., 410 Yeon Bldg.
NELSEN, N. B., 168½ Broadway.
NEWCOMB, BEATRICE CRAWFORD, R. F. D. 2, Box 179, Salem, Ore.
NEWELL, BEN W., Ladd & Tilton Bank.
NEWELL, W. K., 1415 University St., Eugene, Ore.
NEWHALL, ROGER, 100 Grand Ave.
NEWLIN, HAROLD V., 730 Chamber of Commerce Bldg.
NEWLIN, MRS. PAULINE, 181 E. 14th St.
NEWTON, JOSEPHINE, Newton's Ranch, Lankershim, Cal.
NICKELL, ANNA, 1415 Boren Ave., Seattle, Wash.
NICKLES, SIDNEY, 801 Multnomah St.
**NILSSON, MARTHA E., 320 N. E. 11th St.
NORMAN, M. OSCAR, 698 E. 62d St. N.
NUNAN, CINITA, 489 W. Park St.

O'CALLAGHAN, MALLINDA, 608 Board of Trade Bldg.
OLESON, OLIVE, 730 Hoyt St.
OLIVER, ELLA D., 225 Hunter Place, Bend, Ore.
OLSEN, DORIS M., 96 N. 9th St.
OLSON, RUTH, 919 Borthwick St.
ORMANDY, HARRY W., 501 Weidler St.
ORMANDY, JAMES A., 501 Weidler St.
OSBORNE, DOROTHY, 28 W. Church St.
OSBORN, ROBERT W., 1260 Laurelhurst Ave.
OSVALD, RALPH M., 552 Belmont St.

PAETH, WILLIAM J., R. F. D. 3, Estacada, Ore.
PAETH, MRS. WILLIAM J., R. F. D. 3, Estacada, Ore.
PARCHER, LOUISE, 416 E. 41st St. N.
**PARKER, ALFRED F., 985 Tolman Ave.
PARKER, JAMIESON, 985 Tolman Ave.
PARKER, ROSE F., Box 58, R. F. D. 1, Milwaukie, Ore.
PARKER, MRS. W., Box 34, R. F. D. 1, Milwaukie, Ore.
PARSONS, MRS. M. R., Mosswood Road, University Hill, Berkeley, Cal.
PATTULLO, A. S., 500 Concord Bldg.
PAYTON, PERLEE G., 3916 64th St. S. E.
PENDLETON, CECIL M., 288½ 3d St.
PENLAND, JOHN R., Box 345, Albany, Ore.
PENLAND, JOHN ROBERT, 119 W. 7th St., Albany, Ore.
PENWELL, ESTHER, Long Beach, Wn.
PERRY, R. A., 4924 E. 66th St. S. E.
PETERSON, ARTHUR S., 537 E. 8th St. N.
PETERSON, MRS. A. S., 537 E. 8th St. N.
PETERSEN, AUGUST, 268 Nartilla St.
PETERSON, CARL, Graphic Arts Bldg.
PETERSON, E. F., 780 Williams Ave.
PETERSON, MRS. HUGH, Chehalis, Wn.
PETERSON, LAURA H., 395¼ Clifton St.
PHILLIPS, MABEL F., 251 12th St.
PHILPOE, EVERETT A., 900 E. 27th St. N.
PIERCE, BELLE, 1406 W. 39th St., Vancouver, Wash.
PIERCE, MARIE M., 1406 W. 39th St. Vancouver, Wash.
PITTENGER, MRS. JESSIE B., Multnomah A. A. Club.
PLATT, ARTHUR D., 211 E. 55th St.

PLUMB, H. L., Forest Service, Bend, Ore.
POWELL, MARY E., 1330 E. Taylor St.
POWER, MRS. M. S., Cathlamet, Wn.
POWERS, PAUL R., 515 E. 46th St. N.
PRENTYS, ROLAND P. W., 764 Montgomery Drive.
PRENTYS, MRS. ROLAND P. W., 764 Montgomery Drive.
PRICE, A. B., 768 Quimby St.
PRICE, BERYL E., 1000 E. 29th St., Vancouver, Wash.
PRIDEMORE, L. F., Government Camp Hotel, Rhododendron, Ore.
PRIDEMORE, MRS. L. F., Government Camp Hotel, Rhododendron, Ore.
PUGH, LAURA E., 4811 34th St. S. E.
PURDY, J. EDGAR, 304 Hunter Place, Bend, Ore.

RAMSEY, LENA JEAN, 3053 16th St. N. W., Washingtcn, D. C.
RANKIN, JOHN G., Coffin-Redington, San Francisco, Cal.
RANKIN, MILDRED, 568 Ladd Ave.
RAUCH, GEORGE L., 902 Yeon Bldg.
RAUCH, MRS. MABEL E., 771 E. 72d St. N.
REA, WALTER R., 554 Everett St.
REDDEN, CECIL V., 314 W. 8th St., Vancouver, Wash.
REDMAN, FRANK M., 1014 N. W. Bank Bldg.
REED, MRS. ROSE COURSEN, 308 Bush & Lane Bldg.
REED, R. H., 248 Killingsworth Ave.
REGER, ELIZABETH M., 615 Marshall St.
*REID, HARRY FEILDING, John Hopkins University, Baltimore, Md.
RENFRO, MRS. BESSIE M., Box 411, R. F. D. 3, Yakima, Wash.
RENFRO, JOE H., Box 411, R. F. D. 3, Yakima, Wash.
REYNOLDS, LLOYD, Y. M. C. A., Corvallis, Ore.
RHODES, EFFIE J., 935 E. 26th St. N.
RICE, EDWIN L., 1191 Yamhill St.
RICEN, EDGAR M., 880 Overton St.
RIDER, GEORGE L., 1305 E. 14th St.
RIDER, MRS. GEORGE L., 1305 E. 14th St.
RIDDELL, GEORGE X., care Standard Oil Co., Tacoma, Wash.
RILEY, FRANK BRANCH, Chamber of Commerce Bldg.
RIMBACH, RUDOLPH, 285 Graham Ave.
RISELING, ROBERT F., 1426 N. W. Bank Bldg.
ROBE, LEILA C., Hoyt Hotel.
ROBERTS, ELLA PRISCILLA, 109 E. 48th St.
ROBERTS, J. M., 545 E. Broadway.
ROBINSON, EARL C., 660 Morgan Bldg.
ROLAND, C. W., 655 Everett St.
ROLAND, MRS. C. W., 655 Everett St.
ROOT, MILDRED ANNA, 992 Minnesota Ave.
ROSE, JOHANNA, 1355 Sandy Blvd.
ROSENKRANZ, F. A., 335 N. E. 21st St.
ROSS, LADNER V., 590 Main St.
ROSS, LINDSLEY W., 590 Main St.
ROSS, RHODA, 1187 E. 30th St. N.
ROSS, WILLIS W., 1076 E. Oak St.
ROSS, MRS. W. W., 1076 E. Oak St.
ROTH, E. L., 1108 E. Main St.
RUCKER, WILLARD, 763 E. Everett St.
RUTQUIST, HARRY C., 202 Gasco Bldg.

SADLER, E. L., 807 Savier St.
SAKRISON, CARL H., 356 Fargo St.
SAKRISON, ETHEL, 356 Fargo St.
SAMMONS, E. C., 544 N. E. 20th St.
SCHARPF, GRETCHEN, 429 E. 46th St. N.
SCHNEIDER, KATHERINE, 260 Hamilton Ave.
SCHRAMM, R. A., 240 Stark St.
SCHULDT, MRS. HELEN, 147 W. Emerson St.
SCHWARZMAN, P. C., 10 Holgate Moorage.
SCOTT, JOHN D., 6th Floor, Electric Bldg.
SCOTT, ISABELLA F., 521 E. 11th St. N.
SENN, MRS. HELEN MILLER, 315 Yeon Bldg.
SELF, NORA, Camas, Wash.
SEVERIN, WILLIAM C. E., Box 34, R. F. D. 1, Milwaukie, Ore.
SEYMOUR, DARWIN C., First National Bank.
SHAVER, CORA M., Box 321, R. F. D.6.
SHELDON, HAZEL L., 7219 84th St.S.E.
SHERMAN, MINET E., Forest Service, P O. Bldg.
SHIELS, LAWRENCE W., 936 E. Everett St.
SHIPLEY, J. W., Underwood, Wash.
**SHOLES, C. H., 6427 Repton St., Los Angeles, Cal.
SHOLES, MRS. CHARLES H., 6427 Repton St., Los Angeles, Cal.
SIEBERTS, CONRAD J., 685 E. Stark St.
SIEBERTS, MRS. CONRAD J., 685 E. Stark St.
SILVER, ELSIE M., Ladd Estate Co., Concord Bldg.
SIMON, FELIX, 5136 Woodstock Ave.

SIMON, LEO F., 551 4th St.
SIMONSEN, CAMILLA, 1914 E. Yamhlll St.
SKINNER, ARTHUR, Multnomah Club.
SKINNER, GRANT, 16 O'Kane Bldg., Bend, Ore.
SLAGEL, ANNIE LAURIE, 255 N. 21st St.
SMITH, ADRIAN E., 127 E. 39th St. S.
SMITH, BURCHARD, 864 Dunkley Ave.
SMITH, FRED L., 2101 Young St., Bellingham, Wash.
SMITH, KAN, 5405 Leary Ave., Seattle, Wash.
SMITH, LEOTTA, 153 Court House.
SMITH, L. E., Redmond, Ore.
SMITH, MARY GENE, Campbell-Hill Hotel.
SMITH, WARREN D., 941 E. 19th St., Eugene, Ore.
SMITH, W. E., Marshall-Wells Co.
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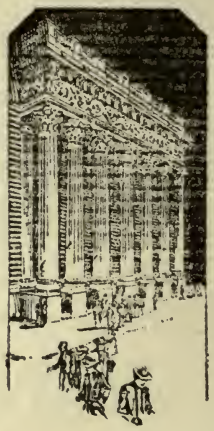

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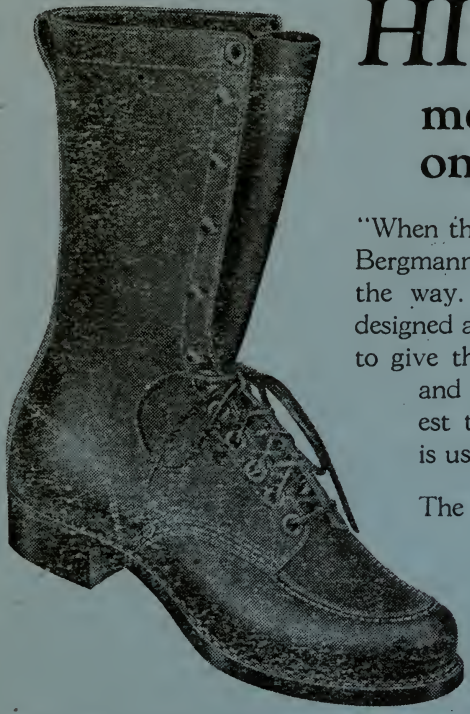

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A Record of Mountaineering in the Pacific Northwest

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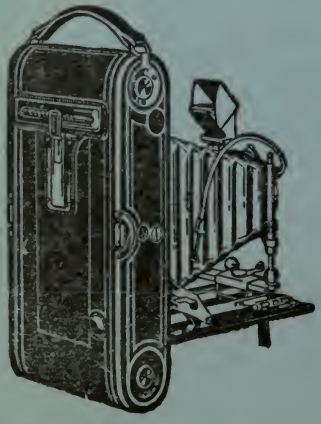

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MAZAMA

A Record of Mountaineering in the Pacific Northwest

Edited by ROBERT W. OSBORN

VOLUME VI PORTLAND, OREGON, DECEMBER, 1923 NUMBER 4

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Photo by Philpoe.

Mt. Hood, framed by the trees above Lost Creek Canyon, Paradise Park.

MAZAMA

Volume VI. PORTLAND, OREGON, DECEMBER, 1923 Number 4

The Thirtieth Annual Mazama Outing

By ROBERT W. OSBORN

MT. HOOD, Oregon, elevation 11,225 feet, nationally known because of its distinction among those mountains eternally crowned with snow-field and glacier, was the birthplace in 1894 of the Mazama organization. For many decades hundreds of climbers have found Mt. Hood's slopes and lofty peak worthy goals of attainment. Its accessibility from Portland and Hood River and the advent of the automobile and fine roads have made it possible for the outdoor enthusiast to leave the streets of the city and within three hours be at the base of the mountain itself.

For thirty years Mazamas have been participating in annual climbs of Mt. Hood, interspersed with numerous special trips, until one might suppose that every park, canyon and glacier of the old mountain had been thoroughly explored. The story of the 1923 outing is one of surprise and wonder that this was found not to be so.

Sunday, August 5, 1923, was the date of departure. Long before eight o'clock that morning Mazamas and would-be Mazamas were headed for the auto terminal depot arrayed in the full regalia of the clan—no two outfits alike, some new and untried, while others bore unmistakable signs of many an introduction to mountain trails. The crowd was further augmented by a number of envious admirers, gathered to see the start. Some evidently had yielded at the last moment, with just enough time left to gather dunnage and buy a ticket, because many bed rolls which the Outing Committee insisted should have been ready a week earlier were on hand to be included with the passengers.

Through some unforeseen miracle, everybody arrived, the dunnage was all secured and shortly after eight o'clock the caravan of stages set forth with its load of adventurers, nearly a hundred in all. The streets of the city were soon passed for the open roads of the country. Farms and tiny villages whisked by while Mazamas met old and new friends among their stage companions, and first-trippers, whether members or

not, were made to feel at home, if that were possible on a huge bus tearing along at thirty-five miles an hour.

The first regular stop was the town of Sandy where those who had forgotten to buy chewing gum and chocolate bars found an opportunity to do so, while the villagers, awakened from a Sunday morning nap, peered out from behind window blinds to see what the commotion was about. The first unscheduled stop was caused by overheated brakes on one of the stages. Fire-fighters rushed to the rescue and no damage was done.

Soon the way led up the valley of the Sandy River, along the lower end of the famous Barlow Road across the Cascades used by the pioneers of early days, and now being converted into a fine automobile highway as a part of the Mt. Hood Loop Road.

By noon all of the party had arrived at Twin Bridges, a point on the highway about five miles below Government Camp. This is a spot that will become more and more familiar to every Mazama, because it marks the location of the first Mazama lodge, which is now practically completed. It is described in a separate article.

Arrived at the point of debarkation for Paradise Park, the party first lunched and then assembled packs and alpenstocks for the seven mile jaunt to camp. This hike up Zig-Zag ridge, while interesting, was probably not the most enjoyable part of the outing. In the first place it found a great many of the party with muscles somewhat unaccustomed, as yet, to steep and dusty trails, to boots and hobs and to unadjusted packs. There was plenty of time, however, and an easy pace made the first ascent toward Mt. Hood more agreeable.

Fog obscured the mountain, but the lower country was pleasantly pictured in the afternoon haze. Dense timber was entered for the first time about three miles from Paradise Park. At a trail maker's camp, a welcome spring of water was sampled. It also marked the point where the hikers began to be "sampled" by a voracious mob of mosquitoes. These pests had no mercy and the exercise of warding off mosquitoes was added to that of walking.

"Camp," that welcome haven for tired hikers, received its first delegations early Sunday afternoon, and thereafter until dark, delayed parties drifted in. Camp quarters were appointed on the meadowed ridge which extends through Paradise Park and in an incredibly short time, tents, "pup" tents, lean-tos, canvas-flies, and every other sort of camp protection began to appear in the sheltered places which abounded.

Across the canyon, the home of an icy torrent, gleamed the white of the cook-tent, the first place for which the wise Mazama headed.

Instead of the welcome call of "SOUP" from Cook Harry Hall, a disconcerting fact was learned. Hall had been summoned to Portland very suddenly because of illness in his family. The necessary sustaining announcement followed, however, that another cook had been luckily secured. It should be stated here that he handled a difficult situation very creditably until Harry Hall returned two days later.

Threatening weather—wind, fog and a hint of rain—added to the enjoyment of the first evening in camp. Swirls of vapor hid Mt. Hood from sight, lifting enough only now and then to give a glimpse of Zig-Zag Glacier, or perhaps, Illumination and Crater Rocks. That night the fog hung low and damp and the wind roared through the trees with sufficient force to give all of the atmosphere of a wild night in camp. Monday morning was the weatherman's climax. He let loose a steady drizzle of rain at breakfast and his leaden skies promised little relief. Had there been any pessimists in camp this would have been their inning, but the optimists prevailed and by noon the rain had ceased, although the fog was an intermittent visitor for several days.

Camp John Lee, named in honor of the man who for some years had cherished the dream of seeing a Mazama outing in Paradise Park, produced many first-day activities. The botanists, led by Henry J. Biddle, the professional-amateur on things botanical, set forth early on a still hunt for "specimens" and their discoveries made an interesting event for the camp-fire session that evening. Mississippi Head, a great promontory of rock above camp, was the inspiration for an exploring party led by B. A. Thaxter. Just why this rock was named for a hard-headed Mississippian, no one seemed to know.

A bug-a-boo which threatened the peace of the camp was the question of whether the whole party could cross Reid Glacier in the hike around to Eden Park for the second week of the outing. To set this rumor at rest, John Lee and LeRoy Anderson led small parties around to Reid Glacier, Monday afternoon. The purpose of the trip was to estimate the obstacle to be crossed and to fix ropes over the canyon wall to aid in the descent. The trip had been scouted the week previous and John Lee stated that the crossing could be made, although there would be thrills for those participating. The story of that thrill comes later.

Tuesday the seventh was an eventful day. In the morning the national anthem was sung and the camp flags unfurled. The exploring spirit then broke out in earnest and brought interesting adventures to many, the most "infamous" being the scramble to Burnt Lake enjoyed by fifty-five warriors led by John Leach. To mention "Burnt Lake" in any Mazama gathering today will bring a laugh, although there was

nothing mirthful about the trip at that time. In short, the lake, located some miles below camp on Lost Creek, was an attraction for swimmers and to those who wanted to see what a burnt lake looked like.

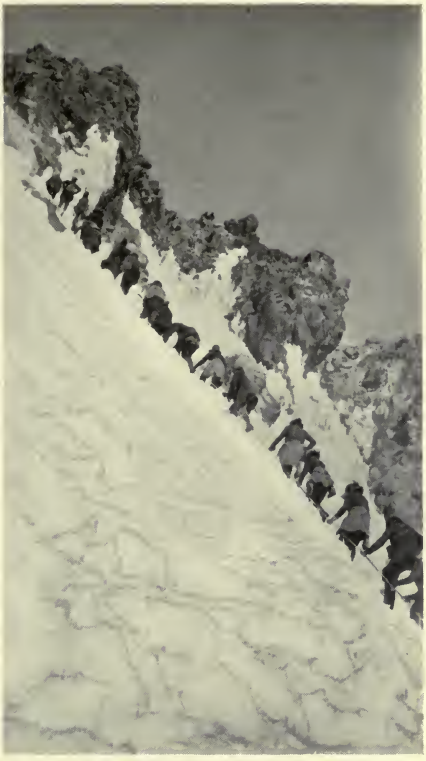
The rather inaccessible lake was reached without anything particularly exciting happening, but on the return Mr. Leach suggested that a "short-cut" be taken back directly up Lost Creek canyon. He was joined by a majority of the party, while a few fortunate ones escaped by retracing their steps to pick up discarded wraps. The rest of the tale is obvious. Entanglements that would have dismayed a doughboy greeted the climbers in the canyon. Soon members began to tire, the hour grew late and camp seemed far away. When things looked the bleakest rescue parties began to appear from camp with flashlights. By nine o'clock everyone had arrived at the soup kitchen. To fifty-five at least, the memory of Burnt Lake will linger.

Four "outlaws" of Mt. Washington unsuccess, E. F. Peterson, leader, John Penland, Frank Redman and Robert Osborn, set out at nine o'clock for a jaunt around the mountain. Much to their surprise and to every one else's, they completed the circuit and were back in camp in time for supper with a vivid account of interesting experiences.

Another event of the seventh was a summit climb of Mt. Hood by four stalwarts, Pasho Ivanakeff, A. H. Marshall, Edwin L. Rice and Lee W. Foster.

Still another group, led by John Lee, found Yocum Ridge attractive and went to investigate its offerings. Some of the party returned that evening, while Messrs. Lee, Thaxter, Biddle, Rice and Anderson went on to Eden Park to locate the site for the second week's camp. They returned the next day to report a wonderful bivouac in Eden Park and told such glowing tales of the natural beauties of the place that anticipation for the second week was considerably increased. Mr. Anderson very generously consented to remain in Eden Park to care for the supplies that were to come in and to act as a reception committee for the party on the following Sunday.

The weather having cleared, leaders of the outing announced on Wednesday, that the official climb of the mountain—always the big event of every outing—was set for the next day. That day's picture was one of rest for the next day's tests. A cobbling shop was opened hard by the cook tent and it was a lucky swain who did not find himself engaged in repairing other shoes than his own. One unlucky fellow had the misfortune of exchanging the boots of two fair Mazamas! The camp-fire session that evening was largely taken up with announcements of the climb and by admonitions from the leader to observe safety-first



Photos by Chas. G. Wilson.

Official climb of Mt. Hood from Paradise Park by Mazamas, August 9, 1923. Upper left—Crater Rock. Upper right—Near the top of the south side chute. Lower—Party on Upper Zig-Zag Glacier, Crater Rock in center.

Mt. Hood. Lost Creek Falls and view of Paradise Park in foreground.

Photo by Boychuk.

and common sense dictums at all times on the climb. His remarks had a later significance.

Before daylight, Thursday, August 9, Camp Lee was astir with the preparations for the ascent. By six o'clock the long sinuous line of climbers was on its way toward the summit. Just below Mississippi Head, Mr. Lee called a halt for the formation of squads. Nine leaders were chosen, one being for the "hospital squad" composed of those who might become sick or could not travel as fast as the others. By dividing the long line into squads, with leaders and rear-guards, interest as well as efficiency was added to the ascent.

The climb from Paradise Park joins that of the regular south side route just below Crater Rock and is both shorter and easier. The official climb on the ninth presented no difficulties and the slow pace set by the leader, allowed all, and there were forty in the party who had never climbed a snow peak before, to proceed with maximum comfort and enjoyment. To be sure, the view to the west was obscured by the heavy bank of clouds, but once above them, with the sun blazing down, this uneasy sea of clouds presented an entrancing sight to the climbers. Lunch time and an hour of rest were enjoyed by the side of the crater, among the sulphur fumaroles. Far up above, reached only by a nearly perpendicular snow-field, could be seen the ranger's cabin on the summit and by it stood the flag pole, with the flag at half mast because of the recent death of President Harding.

The entire party—forty-six being women—made the summit and the "hospital squad" was in no way behind. Views of the mountains to the north—Rainier, St. Helens and Adams—repaid all for the climb. The Hood River valley and Eastern and Western Washington appeared in miniature, map-like arrangement for the inspection of those who had won their summit badges.

While the ascent had been made without mishap, the advices of John Lee were forgotten on the return and several glissaders came to grief at the bottom of the steep snow slope below the summit. Some of the sliders executed some marvelous gyrations and head-long dives, but except for a few bruises, no one was injured.

The near-tragedy of the day, however, occurred a little later as the party descended over the Zig-Zag Glacier. One of the young women while racing with others for a standing glissade, lost her footing, rolled for a short distance and disappeared over the edge of a crevasse. Her horrified companions rushed forward and were immeasureably relieved to find that she had landed on a ledge in the crevasse about eight feet down. The fact that a few feet to one side the crevasse reached a depth of over fifty feet added to the seriousness of this contribution to the

day's events. It was only a matter of moments before the girl was extricated, but it was a greatly subdued squad that proceeded on to camp, and the incident was made the subject of a chastening lecture that evening, with no soft pedal, from John Lee.

On Friday, August 10, 1923, the outside world did homage to the memory of Warren G. Harding. High up on old Mt. Hood, in a setting of grandeur, the Mazamas paid their tribute with a camp-fire session, unexcelled for beauty and impressiveness.

Many visitors hailed the camp during the week-end and the mess-line resembled a merry-go-round. There were, in fact, probably 135 people in camp then. The camp-fire session on these days, with Frank Branch Riley as leader, will long be remembered for the rare talent introduced on the fire-lit stage among the trees.

An exceedingly interesting side-trip was one to the high falls in the Sandy River Canyon near Yocum Ridge. E. L. Rice led a trip to these falls which make a sheer drop of 200 feet. The canyon itself is extremely deep and is constantly filled with dust from the rock-slides and avalanches which continually tear down its sides.

The second official climb of the week was made on Saturday morning by a group of new arrivals in camp. The ascent was entirely successful.

Late Saturday afternoon, all events pointed to the evacuation of Camp Lee and the preparations for the knapsack trip around to Eden Park. Dunnage was again made up, to be taken back to Twin Bridges and around to Hood River for the Eden Park pack-train. The second-weekers carried enough protection for a one-night stand in the new camp before "the dunnage bags came in." The camp-fire session Saturday evening had the atmosphere of a "last day," except to those who were bound for Eden Park.

An eventful second week began for 61 Mazamas when they said farewell to Camp Lee, Sunday morning, and turned northward for a traverse around the mountain high up over snow-field and glacier. Ray Conway was on hand to film the proceedings but to the disappointment of all, he found later that his moving picture camera had failed to function.

Now came that thrilling experience known as the crossing of Reid Glacier. It was a grave responsibility for the leaders to undertake, because if Fate had decreed a rock slide at the wrong moment there would have been few left to tell the tale. The whole feat was so well described by Fred H. McNeil in the *Oregon Journal* that his account is substantially reprinted below.

"Reid Glacier," McNeil writes, "is the most picturesque, probably, of any spot on Mt. Hood. In fact, the word is inadequate: terrific is

more to the point, for here, more than any other place, one sees the profound effect of the tremendous forces of destruction which are constantly tearing at the mountain. The movement of this ice field has hewed great cliffs as sheer as if they had been sawed. The huge cirque at its head might be compared to a crater, one side of which has been broken out. Portland looks into this cirque through the open side, out of which creeps Reid Glacier.

"The southeast ridge of the lateral moraine is a sheer wall, hundreds of feet high, with scarcely a break from where it leaves the base of Illumination Rock until it reaches the timber-line. Down this wall the Mazamas had to go, or retrace their steps. The passage really seemed impossible, for the top of the ridge has an overhanging lip, from which one could peer down upon the floor of the glacier itself.

"At a point about 7000 feet up the mountain, John Lee had discovered a snow chute, which is just like the name sounds, a steep trough from 3 to 60 feet wide, bounded by rocks, filled with snow, and just as steep as frozen snow will lie. Its pitch must have been about 60 degrees and at some points the snow had melted, leaving a treacherous stretch of bare rock.

"Around a secure boulder set on the rim about a dozen feet from the edge a rope had been placed earlier in the week. Ed Peterson slowly descended, kicking steps in the snow. The same process was gone through with the second rope about a yard from the first. During this intermission the party was lunching and resting on the grassy slope above.

"The cautious descent was started. Three companies were sent down on each rope, two moving abreast, each having a leader and rear-guard. The hazardous feat was accomplished without accident, although the climbers were menaced more than once by falling rocks.

"Soon the entire party was resting on a tiny rock island in the middle of the glacier, well up under the magnificent ice-falls where towered for hundreds of feet, strikingly beautiful seracs of blue and green ice. An hour later and the climbers were ascending the north wall of the glacier to Yocum Ridge. From the top, during another rest, the cry of 'avalanche' caused all to turn and see a mass of ice and rock drop into Reid Glacier, where but a moment before the party had been resting."

Once past the hazardous Reid Glacier, the pathfinders made their way easily over Sandy Glacier, climbed Cathedral Ridge and saw before them the home stretch to Eden Park, offering the choicest glissading of the whole trip. It was near six o'clock when the weary travelers came to the upper reaches of Eden Park and as they pushed deeper and

deeper into the woods and meadows, the heralded beauty of Eden Park became a reality. Camp was finally sighted and a yell brought a responding hail from Mr. Anderson, the new camp's guardian for a week. It was a tired and hungry crew who made camp that night. Harry Hall, although he had made the trip with the rest, set at work and in a short time had a supper ready that was the most appreciated of the whole outing.

That evening everyone gathered in "Sunset Park" for a day's impressive closing.

The new camp was impressively dedicated as Camp Nilsson, this time honoring Miss Martha E. Nilsson, known and loved by all Mazamas, for many terms chairman of the Outing Committee.

No time was wasted on Monday in exploring the new district. Parties were dispatched in every direction to locate the myriad allurements of the park. Five venturesome spirits investigated the feasibility of climbing the west ridge of Mt. Hood, and two, Merle Manly and the writer, returned successful.

John Lee was the leader for a trip, Tuesday, August 14, which led up over the lower moraine of Ladd Glacier to the ice-fields of Coe Glacier, which is one of the most accessible and at the same time spectacular glaciers on the mountain. There were thirty-four Mazamas and a dog on this trip. The dog, it was reported, proved as adept as anyone in negotiating crevasses and slippery ice-fields. Given a chance, he might even have equalled "Stickeen" of John Muir fame. After inspecting Pulpit Rock and Barrett Spur this party proceeded down Coe Glacier to Elk Cove and Wiyeast Basin, two fine adjuncts to Eden Park. Dollar Lake is a tempting round bowl of water in Elk Cove.

On this day, also, another notable trip around the mountain occurred. Fred Stadter, Fred Smith, Lee Foster, Merle Manly and Robert Osborn left camp after breakfast and took the route back toward Paradise Park. An accomplishment of the trip was that of going directly up Reid Glacier, zig-zagging among its circling crevasses, to the base of Illumination Rock and then cutting steps to the top of the ridge. This circuit trip was made in the record time of eight hours.

The narrative has now reached a point where it must give an account of the most hazardous undertaking of the outing, not excepting Reid Glacier. It was the north side climb. Usually no more dangerous although more difficult, than the south side route, the north side this year was entirely devoid of snow from the bottom of the rocks to the summit and as a result every step of a climber loosened rocks of varying sizes.

An early start was made because several miles, from Eden Park

Photos by Boychuk and Marshall.

Eden Park Flower Beds, Mt. Hood.

The west side of Mt. Hood.

Photo by Boychuk.

to Cooper Spur, had to be made before reaching the north side route, a detour that required time and energy to make. Five men left Camp Nilsson much later and by crossing high over Coe and Eliot glaciers reached the top of the spur a full hour ahead of the main party. At Tie-up Rock, squads were formed and ropes provided for each leader to harness his climbers together. By this time it was nearly two o'clock, the afternoon shadows began to creep down over the north side and it grew colder and colder. Real danger waited for the party where the ropes were attached in the rock chimney.

No sooner were the climbers in the chute than rocks loosened by the group or by "volunteers" above, came with a sickening clatter down upon the hikers, who clinging to the ropes in the slippery chute had very little opportunity to dodge. Many were struck with projectiles but luckily no one was hurt. The biggest scare of all occurred when a seventy pounder made its sudden appearance above. The leading squads escaped but the last squad was directly in its path. The rock struck and bounded straight for the huddled group. There was a thud as the rock hit someone and a man fell prone. The rock was stopped. Merle Moore was the man hit, but by a miracle the rock landed low enough just to knock his feet from under him.

Once the summit was reached little time was taken to observe scenery. It was then four o'clock, five hours from camp for twenty-seven hungry and tired Mazamas. By using extreme caution no accidents happened in the descent, but by the time Cooper Spur was reached the sun was ready to drop from sight. Still roped together the party climbed down from the spur to Eliot Glacier and then ascended to a point below the great cliffs where a crossing of the glacier itself was effected. One of the extremely impressive sights of the whole outing was this one from Eliot Glacier looking west to the setting sun, while on the left a crescent moon and Jupiter hung just above Cathedral Ridge. Three glaciers had to be crossed before camp could be reached and with night coming on rapidly, the first three squads had to set a fast pace to do it. The fourth was caught in the darkness and was forced to make a detour which brought it to camp an hour later than the others. By this time many were about fagged.

It was nearly nine o'clock when the blazing camp-fire of Camp Nilsson was seen down on the meadows among the trees. Never will that reception be forgotten. The tired climbers received every care from those in camp and a hot supper soon revived laggard energies.

Then followed the closing days of camp, filled with the many regrets of "last days." Scenes were re-visited during those days and new ones undertaken to the lower ridges and canyons of the west side.

After the president's tea on Saturday, which President Montague managed to escape, everyone realized that it was time to pack up "those dunnage bags" again.

A party of eight left Camp Nilsson Friday afternoon enroute for Eagle Creek on the Columbia River Highway by way of Lost Lake, Wahtum Lake and the Eagle Creek trail, a distance of about forty miles. The next day three others took the same route. These parties reported an interesting overland trip, arriving in Portland ahead of most of the main party.

The rest of the second-weekers left Camp Nilsson and Eden Park early Sunday morning for the long hike to Parkdale where the busses were to pick them up. The final day went without mishap and by nine o'clock all of those who took part in the thirtieth annual Mazama outing were back home telling of their experiences.

The Outing Committee, Martha E. Nillson, chairman, John A. Lee and Charles J. Merton, deserve much praise for their skillful management and preparations which made the two weeks a success.

A happy sequel to the outing, one that brought back all of the chief events, was "Mazama Day" at the City Club of Portland, which met at the Hotel Benson, Friday noon, August 24. All Mazamas were invited and a large party heard Richard W. Montague, Alfred F. Parker, John A. Lee and Frank Branch Riley tell vivid stories of the outing. It was the type of meeting that spreads the fame of Mazama.

Personnel of the Thirtieth Annual Outing

Address is Portland unless otherwise indicated

Helen Alexander.
J. E. Allison, Eugene, Ore.
Leroy E. Anderson.
Zoevelair Andrews.
Tillie Auer.
Roy W. Ayer.
Alma H. Bailey.
Geo. L. Barker.
Mrs. Geo. L. Barker.
Henry J. Biddle, Vancouver, Wash.
Edmund Bidwell.
Herman T. Bohlman.
Mrs. Herman T. Bohlman.
Joe O. Bonneau.
Walter Boychuk.
Marion R. Bowers.
Albert S. Brown, New York, N. Y.
Dorothy S. Brownell.
Anna Burnham.
Esther Butterworth.
Celeste Campbell, Eugene, Ore.
Carolyn Cannon, Albany, Ore.
Margaret Clark, Oregon City, Ore.
Vivian L. Clodfelter.
Harry P. Coffin, Jr.
Lucile Cogswell.
Effie Concannon, Des Moines, Iowa.
Maude W. Cooke, Oregon City, Ore.
Ethel Coover.
Enith Coover.
Edgar E. Coursen.
H. D. Crockett.
Elsie F. Dennis.
Philip Dick.
Bertha M. Doeltz.
Harriet Doeltz.
Mary E. Doyle.
Nettie V. Drew.
Dorothy A. Eckman.
Genevieve Evon, Gladstone, Ore.
Bernedette Evon, Gladstone, Ore.
W. P. Forman.
Dorothy E. Foster, Eugene, Ore.
Lee W. Foster, Hillsboro, Ore.
Howard A. Fuller, Seattle, Wash.
Bernice J. Gardner.
Albert W. Gentner.
Margaret A. Griffin.
Anna Grill, Chicago, Ill.
J. L. Haglund, Albany, Ore.
Mozelle Hair, Eugene, Ore.
Harry Hall.
Mildred Halvorsen.
Sally P. Harris, Minneapolis, Minn.
Helen S. Hartley.
Aurelia S. Harwood, Upland, Cal.
Mary C. Henthorne.
Oril Elsie Henthorne.
La Verne Hilborn.
Marvin K. Holland.
Bertha Hunter.
Alice Hutchinson.
N. E. Imhaus.
Neni Imhaus.
Pasho Ivanakeff.
Frank I. Jones.
Mrs. Frank I. Jones.
Mildred Joyce.
V. R. Kaufman.
Susanna Kellett.
Anna M. Krumrey.
Martha Landis.
Denison H. Lawrence.
John R. Leach
Mrs. John R. Leach.
John A. Lee.
Chas. F. Loggan.
Mrs. Beatrice De Lacy-McNeil.
L. W. Gertrude Manchester, Seattle, Wash.
M. W. Manly.
A. H. Marshall, Vancouver, Wash.
George Meredith.
Emily M. Moltzner.
Richard W. Montague.
Merle S. Moore.
Mrs. Christine N. Morgan, Los Angeles, Cal.
M. A. Morud.
Kenneth Murfree.
Patsy Neilan.
Erwin G. Nilsson, Gladstone, Ore.
Martha E. Nilsson.
Olive Oleson.

Robert W. Osborn.
B. J. Otis, Seattle, Wash.
Alfred F. Parker.
P. G. Payton.
John R. Penland, Albany, Ore.
Robert Penland, Albany, Ore.
H. S. Perkins.
Mrs. H. S. Perkins.
E. F. Peterson.
August Petersen.
Arthur D. Platt.
Robert S. Platt.
Kathleen Pumfrey.
Frank M. Redman.
Elma Rehwalt.
Edwin L. Rice.
Frank Branch Riley.
Wm. Branch Riley.
T. M. Rogers.
Ella P. Roberts.
John D. Scott.
Annie L. Slagel.
Fred L. Smith, Bellingham, Wash.
Mary Gene Smith.
F. W. Stadter.
Geo. C. Stephenson.
B. A. Thaxter.
Hazel Vaughan.
Louis W. Waldorf.
Grayce Walsh.
Emma F. Waterman, Eugene, Ore.
Leslie E. Webb, Cornelius, Ore.
Evelyn White.
Marian White, Oregon City.
Mildred White.
Annette Wiestling, Seattle, Wash.
Chas. G. Wilson, Bend, Ore.
Marie Williams.
B. M. Woodbridge.
Elizabeth Woodbridge, Berkeley, Cal.
Velmaleta Woolery.
Wallace Youngson.
W. C. Yoran, Eugene, Ore.

1923 Annual Outing scenes in and around Camp Lee and Camp Nilsson, Mt. Hood. Profile rock. picture copyrighted, 1923, by A. H. Marshall.

Photos by Boychuk.

Above—Mt. Hood from Camp John Lee, Paradise Park. Below—Looking east from Camp Nilsson. Eden Park.

The 1923 Mt. Hood Camps

By ALFRED F. PARKER

During the first months of each year, the principal topic in Mazama circles is, "Where are we going this summer?" In view of the enthusiastic accounts given by Mr. John A. Lee of his visit to Paradise Park in 1921*, and the too brief official camp there in 1922**, the concensus of opinion early in 1923 seemed to be strongly in favor of that region for the encampment of this year, and it was eventually decided that the annual outing should be on the west side of Mt. Hood.

The first plan of the Outing Committee was that the entire two weeks should be spent at Paradise Park. But in the meantime there began to reach us from the newly organized Wiyeast Club, of Hood River, alluring accounts of the beautiful country lying at the northwest base of the mountain, which they had recently thoroughly explored. In June, 1923, an illustrated lecture on this region was delivered at the Portland Public Library by Mr. and Mrs. F. W. Rockhold, of Hood River, under the auspices of the Outing Committee. The wonders of Eden Park and other beauty spots on the northwest side were so alluringly depicted that it was determined that our annual outing should include two camps, the first week to be spent at Paradise Park and the second at Eden Park, with a journey across the west face of the mountain as a connecting link.

Probably never before in Mazama history has an outing problem presented more difficulties than this one. Supplies and equipment had to be transported to the first camp, and then entirely around the mountain, via Gresham and Hood River, to the second. Both camps had to be made ready in advance; and, last but not least, the entire party had to be taken across the mountain, over the deep, precipitous canyon of the Reid Glacier. It is a lasting testimonial to the efficiency of the 1923 Outing Committee that these plans were carried out with clock-like precision, and the affair was a complete success.

No small factors in this achievement were the excellent co-operation of the Forest Service, and the prior generosity of Mr. S. Benson, of Portland, who had donated a substantial sum of money for a trail from Twin Bridges, on the Mt. Hood Highway, to Paradise Park. This trail was constructed by the Forest Service and completed just in time for our use. The Forest Service also rushed work on a new trail into Eden Park, so that it too, was ready in time. Without these trails much greater difficulties would have been encountered.

*See "Paradise Park and the West Side of Mt. Hood," by John A. Lee, *Mazama*, 1921.
**See "Mazamas in Paradise Park, Mt. Hood," by Jamieson Parker, *Mazama*, 1922.

Upon reaching our first camp, later named Camp Lee, on August 5, we found ourselves in a series of grassy mountain meadows, between the canyons of Lost Creek and Zig-Zag Creek. Probably other Mazama camps have presented more beautiful sheltered nooks and flower-decked valleys, but from none could a greater expanse of mountain grandeur be gazed upon without leaving camp. To the south and west our view was limited only by the far-distant horizon, while above us to the northwest the mountain towered in all its majesty. One was reminded of Service's lines:

> "I know a mountain, thrilling to the stars,
> Peerless and pure, and pinnacled with snow;
> Glimpsing the golden dawn o'er coral bars,
> Flaunting the vanished sunset's garnet hue.
> Proudly patrician, passionless, serene,
> Soaring in silvered steeps, where cloud-surfs break——"

It was such a place as to induce one to dream away a whole summer afternoon, lying on a bank of juniper, and watching the clouds play about Jefferson and the Sisters, to the south, with the vast expanse of mountainous country between; and then seeing the sun set behind our old familiar lower peaks to the west, reflecting its glow in the broad Columbia, and showing red and gold on the topmost crags of Hood.

Probably no feature of camp life is more delightful than the evenings about the fire, after the wholesome fatigue of a day spent on trail or glacier. At Camp Lee we were particularly fortunate in having much "camp-fire talent," and each evening's session seemed just a little better than the preceding one, as urban reserve gradually wore off, and additional wit and wisdom were revealed. The presence of Mr. Frank Branch Riley, nationally known lecturer, and master of ceremonies *par excellence* on many a former outing, was in itself a guarantee that no camp-fire would prove dull. Mr. Albert S. Brown, after an absence of years, was with us again, with an enlarged repertoire of songs. A male quartette, an orchestra of ukuleles, Mr. E. L. Rice with his clarionet, and Mrs. H. T. Bohlman's beautiful vocal numbers, provided us with abundant music. On the educational side, we had our "old John Lee" with his intimate knowledge of mountaineering and forestry, and Mr. Henry J. Biddle, whose patient study of mountain flora has made him an authority on that subject. Others, too numerous to mention, contributed their share to the entertainment. An evening newspaper, "The Serpent of Paradise," served to enliven the proceedings with accounts of the day's activities and all of the camp gossip. Very few escaped its harmless stings.

Probably the camp-fire program which will stand out most clearly

in our minds in future years was the memorial service in honor of our late President Harding, on Friday, August 10. In a spirit of reverence befitting the occasion, with the stars above and the silence of the wilderness about us, we listened to the simple, appropriate ceremonies arranged by Mr. B. A. Thaxter. Then, after a beautiful characterization of the deceased president by Mr. Montague, and the singing of "Nearer, My God, to Thee," we dispersed quietly to our camps, with a feeling that no more sincere and fitting a tribute could have been paid to the memory of a Christian gentleman who had given his life for his country.

On Sunday, August 12, we were obliged to bid a regretful farewell to almost half our number, upon our departure for Eden Park; for there were many who were unable to remain with us during the second period of our trip.

During the week we had received such enthusiastic descriptions of our future camp that we were almost impatient to see it for ourselves, much as we regretted leaving Camp Lee. Upon reaching our destination, after a most interesting trip across the glaciers, we found Camp Nilsson (as we afterward christened it) fully equal to our expectations, although the surroundings were quite different from those of the previous camp. Instead of the magnificent outlook from Camp Lee, our first impression was one of sheltered seclusion. One of the branches of Ladd Creek came tumbling down a green, flower-strewn valley, and the camp had been established beside the stream, with the formidable northwest side of Mt. Hood facing it, and timbered ridges to the east and west. Pink and white heather, erythroniums and "paint-brush" grew in lush profusion in every meadow. The turf seemed to be firmer and more springy, and the vegetation everywhere more abundant than at Camp Lee. Though we missed the broad sweeps of mountain grandeur which we had been enjoying, yet by making a short climb from camp to the summit of an adjacent ridge we could look down upon Lost Lake, and over the Columbia to the great snow domes of St. Helens, Rainier and Adams. The men's quarters were on the west side of the stream, closer to this view-point, and upon seeing parties of ladies wending their way up the hill in our direction, some of us flattered ourselves in thinking that we were to be paid a visit, only to be informed that it was the scenery, and not ourselves, that had attracted them! "Sunset parties" on the summit of the ridge soon became a part of the daily routine. Bathing, a luxury almost unknown at Camp Lee, was indulged in *ad libitum* in a number of small lakes near by. The "Order of the Lily," a secret society, sprang into existence. To be eligible for membership one must have had a bath, and only certain prescribed bodies of water were "qualifying tubs."

The smaller number at Camp Nilsson, together with the fact that we knew each other better by this time, and the camp was more concentrated, gave a feeling that we were all "just one big family," as someone expressed it. At first we missed keenly many of our vaudeville entertainers and lecturers who had made the evenings at Camp Lee so enjoyable; but we soon found that we still had with us hitherto neglected talent. Mr. George Meredith proved a capable song leader and master of camp-fire activities. We also had a number of visitors who stayed with us for a day or two at a time, and who contributed interesting talks. Among them were Mr. and Mrs. F. W. Rockhold, than whom there are none better informed in regard to this part of Mt. Hood, and Mr. and Mrs. C. E. Graves, of Hood River. Mr. Graves is secretary of the Wiyeast Club. Mr. T. H. Sherrard, superintendent of the Oregon National Forest, and Mrs. Sherrard, who is actively interested in the Girl Scout movement, also honored us with a short visit. Mr. Walter O. B. Davidson, our genial and competent packer, made a "hit" with his recitation, "You'll Always Find the Pack-Train There," and he proved that the verses told only the truth, as far as he was concerned, for we always did find his pack-train there, when it was expected. The "Serpent of Eden' continued its daily activities, somewhat shrunken in size, but with undiminished vigor.

Mr. Montague left camp before the official end of the outing, in order to visit Lost Lake, and on Saturday, August 18, the customary dinner in honor of the president was given instead for Mr. John A. Lee, who had been our chief guide and sponsor of the outing. While Mr. Lee was not yet due for a birthday, it was decided to anticipate the date, and consequently he was the recipient of many gifts, each accompanied by a rhyming effusion. Many were the metrical tributes paid to "our John," upon whose broad back so large a share of the responsibility for the success of the outing had been placed. Needless to say, our indefatigable chef, Harry Hall, achieved another one of his culinary triumphs, and some of the costumes worn were gorgeous creations. As the society editor of the "Serpent" recorded, "the affair was the outstanding social event of the season."

But all good times must end, and after six happy days at Camp Nilsson we had to turn our backs on the scenery (and the cook-tent) for the last time and start homeward on the following morning.

To many of us it seemed as if we had been on two outings instead of one. Each camp had been delightful, but entirely different from the other. As comparisons are odious, we shall always like to feel that each was a complement to the other, and helped to round out the whole of a perfect outing.

Photos by Boychuk.

Just a few of the wild flowers found in Eden and Paradise Parks on Mt. Hood.

Photos by Peterson, Foster and Boychuk.

Around the mountain and up the west side, Mt. Hood. Top and middle right—Views of first Mazama party to encircle mountain during outing. Middle left—West side climbers looking down on Sandy Glacier. Below—Approximate route of west side climb.

The West Side Climb *of* Mt. Hood

By MERLE W. MANLY

"Want to go for a walk?" asked Peterson.

"Sure," we replied.

Seven and a half hours later, two of the "walking" party were in the lookout cabin on the top of Mt. Hood, reading three-day-old newspapers and listening to Ranger Phelps declare "mountain-climbing business" to be nothing less than plain foolishness. The two strollers had climbed the west side of Hood, up the rocky ridge that separates Coe and Sandy Glaciers, which, according to old timers, has not been ascended more than two or three times previously.

All of which may sound as if the west side climb was quite an accomplishment, when, as a matter of fact, it doesn't compare with a descent of the same side made by two Seattle Mountaineers late in the afternoon of the day the Mazamas went up. These two chaps started down the west side to pay a visit to Camp Nilsson. Dusk found them looking over the sheer cliffs of Pulpit Rock into the seemingly bottomless crevasses of Coe and Ladd Glaciers. They had taken the north side of that ridge between Sandy and Coe Glaciers instead of the south side.

And so, while the Mazamas toasted their toes around a campfire, and while the folks at Cloud Cap Inn came out on the verandah for a last look at the two-mile-high sunset glow on Mt. Hood, these two Mountaineers were spreading their sleeping-bags on unsoftened lava rather than attempt to descend farther in the dark. The next day in Camp Nilsson they reported having slept "some." At any rate they had come *down* the west side.

There were five in the Mazama party who "went for a walk" from the camp in Eden Park late Tuesday morning, August 14, during the second week of the 1923 outing. There were Ed Peterson, Bob Osborn, Lee Foster, Fred Smith, of Bellingham, Wash., and Merle Manly.

The intention at the start, according to Peterson, was: "We'll just go up a bit and see if there isn't some route we might follow later in the week to the top of the west side. No need to take our coats, or lunch—we'll be right back." Probably no mountain-climbing party ever started out with less external and internal equipment.

The weather was unusual that day. Clouds obscured the sun, yet they were high enough to be above the tops of the snow peaks. Looking back from Sahale Plateau, across what later came to be known as

Sunset Park, Mt. Adams, St. Helens and Rainier were silhoueted. Below us, Sunset Park's garden of flowers was set off by heather-bordered pools and meandering streams. Climbing upward, Elk Cove soon came into view, then Dollar Lake, then the Hood River Valley appeared through the saddle above Barrett Spur.

Next came the Coe Glacier side of the ridge. For a short distance the party took to the snow of the glacier itself but soon were confronted with ice-falls similar to that formidable-looking affair in Reid Glacier. There was no chance of making further progress in this direction. Steps were kicked in the snow over to the ridge, where a better opportunity offered a chance to go higher. The Mazamas reached the Sandy Glacier side of the ridge and rested on a narrow shelf of rock hundreds of feet above the snow and ice. From then on until the middle of the afternoon the route was a worm's path, first on one side of the ridge, then on the other. The going was alternately good and bad. First a lot of time would be lost in crawling around or over a projecting rock, then better speed would be made up short slopes, or stretches of regular rock-work.

Thought of lunch came at noon—no chance to get back to camp for food or to the lunches left in coat pockets. The party heliographed camp that it wasn't a bit hungry anyway, thanks, and kept on going. The "walk" was turning out splendidly.

There came a ticklish point on the south side of a ridge where a rock which had to be used for a handhold jutted out particularly far. Osborn and Manly were ahead of the other three. When they were past they looked back. The rock had moved perceptibly. A few more pulls and it would probably go hurtling to the glacier below. It might even start an avalanche of rocks. Safety dictated that it would be exceedingly dangerous for the last three men to go over the rock. Safety also dictated that for the two ahead to go back as they had come would likewise be dangerous. Those in the rear, therefore, retraced their steps perhaps fifty feet and dropped down to a lower ledge so that they would pass beneath the unsafe rock.

The ledge upon which Osborn and Manly stood led into an icy chute, down which rivulets of water were running and rocks were falling. The lower ledge upon which the other three were climbing led into a longer, snow-filled chute to the right. It looked as if it would be impossible to get out of this snow-chute at the top, so the three behind planned to climb as far as possible, then scale a shoulder of rock, and thus into the chute at the left.

In the meantime Osborn and Manly kept on up the left chute. Their climbing increased by considerable quantity the number of falling rocks. In fact, even though he was only a short distance behind

Osborn, Manly had to keep up a constant guard. Imagine what it must have been farther down for the other three who were planning to follow.

Soon the two ahead were around a turn in the chute near the end. Ahead lay the big snow-field and ice-cap of the west side of the summit. Once that snow was reached it was felt the rest would be easy. The backbone of the climb had been broken, it seemed. As they passed the turn in the chute the two had passed out of sight of the three climbers below. Now they shouted and yelled. Those below heard, but the downpour of rocks did not stop, and a downpour of rocks is an argument that cannot be disputed. The two groups did not see one another again until they were back in camp that evening.

Up on the snow-field of the summit the climbing was easy—until the snow became ice. Here an ice-ax would have been welcome, for an alpenstock makes a very poor substitute. Clouds began to gather around the top of the mountain, too, and the moisture-laden wind cut through flannel shirts. Osborn had one glove which he transferred from hand to hand, and Manly tied blue bandanna handkerchiefs around his hands to keep them from becoming numb. The absence of those lunches was also felt.

A steep ice pitch almost stopped the climbers—that ice-ax would have been doubly useful here. Manly stuck his pole into the ice and held it as a step for Osborn to climb up, then was himself pulled up. That was, indeed, the last obstacle of the climb. A few minutes more and the climbers were over the top, out of sight of Camp Nilsson, and headed for the summit-house. Two dried peaches and two dried prunes, which some climber had left in the lookout tower, tasted like a whole meal.

A half hour's rest and the descent was begun. The regular north side route was chosen for it was already late in the afternoon, darkness would soon come on, and going back down the west side was not a particularly pleasant thought for the two Mazamas.

The wind was blowing a hurricane by this time and was intensely cold. Sand cut into necks and stung ears. Every now and then a rock flew past. Just as he was about to leave the rope tied in the north side chute, Manly lost his footing and did an impromptu glissade through the rock-cluttered snow chute and down over the upper part of the main north side snow-field. He stopped himself, however, before making much headway toward Eliot Glacier and escaped with minor bruises from flying rocks.

The pair lost considerable time attempting to descend to Eliot Glacier high up on Cooper Spur, where an ice bridge seemed to exist.

Investigation proved that the bridge was a myth, that about fifty feet separated the rocky side-wall from the glacier itself. There was nothing to do but kick steps along a sixty-degree snow slope—ticklish business—and drop to the glacier considerably lower down. Then followed a long traverse over glaciers and ridges back to Camp Nilsson, reached by the two "strollers" at nightfall.

It was then that Cook Hall agreed with Ranger Phelps that mountain climbing was mis-directed energy, especially when climbers come into camp late for dinner. The adjectives which Harry applied were unmistakable in meaning, adding spice to an enjoyable double-duty dinner for two exhausted Mazamas.

List *of* Annual Mazama Outings

1894—Mt. Hood.
1895—Mt. Adams.
1896—Crater Lake.
1897—Mt. Rainier.
1898—Mt. St. Helens.
1899—Lake Chelan, Mt. Sahale.
1900—Mt. Jefferson.
1901—Mt. Hood.
1902—Mt. Adams.
1903—Three Sisters.
1904—Mt. Shasta.
1905—Mt. Rainier.
1906—Mt. Baker.
1907—Mt. Jefferson.
1908—Mt. St. Helens.
1909—Mt. Baker.
1910—Three Sisters.
1911—Glacier Peak
1912—Mt. Hood.
1913—Mt. Adams.
1914—Mt. Rainier.
1915—Mt. Shasta.
1916—Three Sisters.
1917—Mt. Jefferson.
1918—Eagle Cap, Wallowa Mts.
1919—Mt. Rainier.
1920—Mt. Baker.
1921—Diamond Peak, Crater Lake.
1922—Three Sisters.
1923—Mt. Hood.

Scenes from Coe Glacier.

Photos by Marshall.

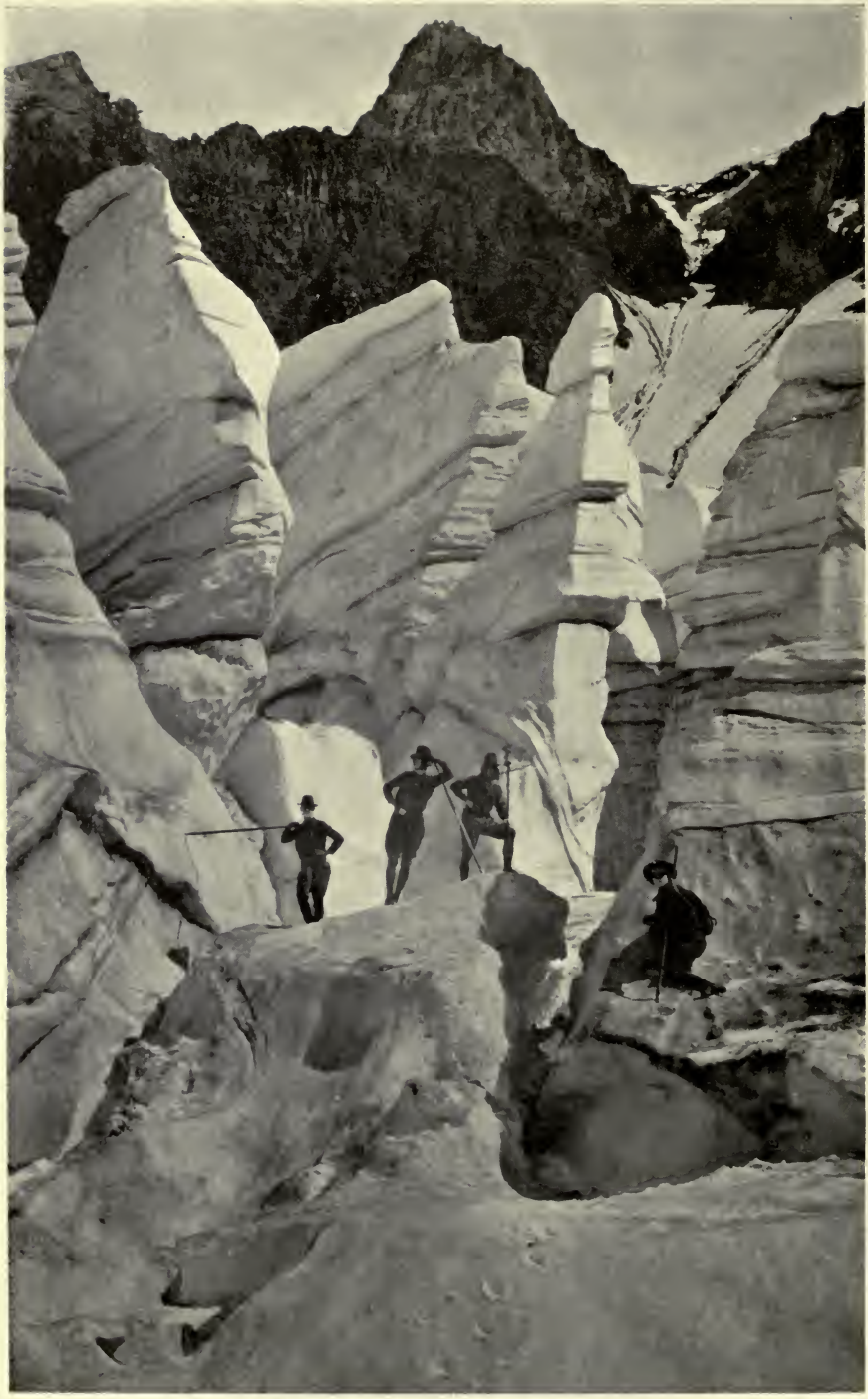


Photo by Foster.

Second around-the-mountain party among the seracs of Upper Reid Glacier.

Around Mt. Hood's Eaves

By FRED W. STADTER

Of the tens of thousands of people who have ascended Mt. Hood, not one per cent of them are aware of the spectacular beauties of the flanks of the old volcanic peak which those who climb along the conventional trails never see. From a mountaineering standpoint, the "ascent" of Mt. Hood is quite an ordinary thing. The famous old "South Side" is a long, laborious walk, first through the timber, then over the rocks and finally up the snow with perhaps a flash of the sensational if conditions are right as one negotiates the crevasse or two on the long rope up Hawkins' Cliffs just below the crest. The north side, commonly called, but really the northeast ascent from Cloud Cap, is something else, but still well known as a "scree" and snow and ice affair, with an always spectacular finish on the rope near the top.

The Mazamas, in their 1923 outing, saw another Mt. Hood. They saw park sections, smaller but as splendid as any on Mt. Rainier. They explored glaciers, smaller than those on the Puget Sound peak, but just as serrated and corrugated, just as steep and broken, and as surpassingly beautiful as the ice streams to be found anywhere in the world.

Just as the outing of 1923 gave different vistas of a peak which most of us think is very familiar, so did the expedition furnish a new variety of trip which has rarely been undertaken in the past by those who have given recreational and study time to Mt. Hood. Not that the girdling expeditions on Mt. Hood were record-breaking or epochal. The encirclements at a high altitude have been done before, but not often, and a greater variety of mountaineering skill is required in their negotiation than is the case in just making the ascent of Mt. Hood, no matter how unfavorable the climbing season may be.

The alpinist who makes the laborious grind through the snow to the summit from the south side, or the more dangerous ascent from the north, does not begin to get an idea of the grandeur of Mt. Hood. Neither the north nor the south side has parks comparable to those on the west, and one has to get off these time-worn summit paths to appreciate the terrific splendor of Hood's glaciers. As one climbs Hood from the north he does get a good peek at Eliot Glacier, which is a splendid ice-field, but the breath-taking vista of Reid Glacier is utterly lost to those who ascend—merely ascend to the summit—and do not explore.

How many readers of this, we wonder, barring those who were on Hood in the summer of 1923, ever heard of Reid Glacier? How many

have seen it, save for that distant sweeping glimpse one gets in taking in Hood's profile from Portland or any other point to the west of the peak? Few, we fancy. Yet Reid is such a noble glacier, vieing with, surpassing, we even think, the glories of Eliot, which are well known to those familiar with the north side of the mountain.

The writer of this had the good fortune to make this horizontal circumnavigation of Hood, just under the eaves of the summit as it were, during the 1923 outing. The expedition included a long traverse, across and upward, of Reid Glacier, giving opportunity for almost minute exploration of this amazing river of ice. Robert W. Osborn, who previously had made the circle, guided, and with us were Merle Manly, Lee W. Foster and Fred Smith.

By the time of our trip, the Mazamas had shifted from Paradise Park, scene of the first week's activities, to beautiful Eden, nestling in the ridges carved out by the lower reaches of Ladd and Coe glaciers as their torrents of melted ice and snow dashed down the canyons to join the several forks of Hood River in the valley below.

Our start, therefore, August 14, was made from the camp, up Eden Park canyon over gentle snow slopes to Sandy Glacier, thence over its easy reaches to Yocum Ridge and Reid Glacier beyond. Yocum Ridge is the left lateral moraine of Reid as one looks to the summit and from it the descent to the glacial floor was simple, the wall being neither high nor steep. We needed only to see that our calks did not slip on the smooth lava slabs. We worked upwards along the wall, presently stepping on the ice, and soon were at the top of the ice fall.

Difficulty began there. The glacier actually drops over a cliff at this fall, great masses of the wall being exposed and forming the "spots" which one sees from Portland. Above the cliff, the glacier is very steep and the serration extremely heavy. The glacier was so badly broken that progress seemed impossible. Before us reared the forbidding perpendicular wall that is the south lateral moraine of the glacier—absolutely insurmountable save at points which from our position were unattainable.

The only thing left was to attempt an upward passage through the seracs for we knew a reasonable chance of "climbing out" lay in the saddle between jutting Illumination Rock and the main peak proper. The ascent was more than devious. It was sensational—a cautious progress over ice that became steeper and steeper and with the course intersected every few feet by yawning crevasses which seemed bottomless.

One can stand on their lips or turn back from the bergschrunds and peer down, down between pitilessly cold, blue walls. Many of these lacerations in the ice's surface were so wide that they had to be rounded

—passage across by the widest step or jump being manifestly impossible.

The seracs formed veritable canyons—meandering alleys as it were between towering sky-scrapers of ice blocks and masses as large as city blocks turned on edge. Stately minarets and needles were flanked by top-heavy and bending pagodas of green and blue, reaching it seemed a hundred feet into the air, some with their mushroom-like heads nodding perilously as the forces of sunshine and gravitation wore away their icy foundations, and each showing the streaks of each year's deposit of new snow as they had in turn congealed into ice.

Progressing in this way towards the summit, looking for our exit to new fields, we came to one frightful gash which seemed impossible of negotiation. Seeking a crossing point, we were amazed to find a natural bridge of rock, a huge fragment which had torn down the glacier from the cliffs at its head and come to a pause at the place probably where it would perform its first and only service for mankind. It seemed solid enough, but we stepped across lightly.

The greatest serration of the Reid Glacier occurs about the center of the great bed above the falls. It is not sufficient to say these seracs are the most beautiful and symmetrical on the mountain. In our opinion, no finer glacial structure is to be found anywhere. An extravaganza of savage gorgeousness seems hurled at the alpinist who gains this point and gazes at the vista before him. Terraced pinnacles rise sheer from the glacial floor, their brilliant surfaces scintillating in the sunlight.

Ice caves about their bases are crystalline palaces of azure, shading as one peers deeper to Crater Lake blues and sea-greens. One can look into the cavern and see that light which shines through the breaker at the coast as it dashes up of a summer day on the rocks. The formations are almost unbelievably intricate—some fine as lace, some coarser and more ponderous, remindful of the carvings of an old cathedral.

The seracs could not be explored too minutely as the glacier was cracking and groaning in an ominous way and the season was the one when the greatest changes were taking place. We steered a course to the right, crossing many more crevasses but finally reaching a point nearly opposite the saddle between Illumination Rock and the main peak. Taking a course upward to avoid a crevasse the party encountered a great sheet of smooth ice. The slope was very steep, almost sheer and steps had to be cut, Foster doing the work as we picked our precarious way just above a very deep chasm with lips twenty feet apart. The ice was covered with mud in places, which added to the problem. The passage also was accompanied by a constant shower of rock and debris from the cliffs above.

Evidence on the glacier shows that many of the rock pinnacles have collapsed and it was plain to see that others, some of which are landmarks visible from a great distance, will soon break up.

The crossing of the ice, however, was finally made. The saddle at Illumination proved only a thin mass of lava dust intermingled with boulders. The scramble, somewhat tiresome, was quickly over, and we soon were in the upper reaches of Zig-Zag, just below and to the west of Crater Rock. On Zig-Zag the party stopped for luncheon, the spot being on a slide which had come down from the vicinity of Crater Rock.

The Zig-Zag passage was without difficulty and the party hit White River Glacier just above where it breaks downward from the old crater of Mt. Hood. This spot, which all south side climbers know, is just east of Crater Rock.

Our first attempt to cross White River was unsuccessful and we dropped down about 500 feet where a passage was located after which the second great difficulty was encountered—the ascent of the east moraine which continues down from Steel Cliff. The moraine is exceedingly steep and debris constantly coursed down its flanks.

Through this mass of boulder-strewn dust we toiled upward, every step causing a miniature slide. Nearing the top, again the rocks appeared too threatening and we retreated again to find a passage still lower. Hardly had we abandoned the climb at that point when one of the loose rock masses in the cliff broke off and with a roar charged down to the glacier, obliterating our very tracks.

To make a long description short, we finally crossed the moraine at a point considerably below Steel Cliff. At the top of the moraine a view was presented of a vast barren of rocks and scoriae which extended from the summit as far down into the White River Valley as one's eyes could reach.

The south side of the mountain had been crossed. Now came the east flank. The glacier was Newton Clark, also little known to the average climber of Mt. Hood. At our elevation, about 7000 feet, we felt sure there would be only a smooth ice-field to traverse, but the going was almost as bad as on the upper stretches of Reid.

The high sections of Newton Clark also are steep. The consequence is crevasses. We found many of them, pitched at every angle. Thin crusts of snow blinded a number and we were on precarious footing more than once. The crevasses were jumped, some with a preliminary run. Water roared underneath most of these crevasses and one wide crack presented the unpleasant alternative of a ducking if we missed our jump.

Newton Clark gives another rare view of Mt. Hood. It is rare in more than one sense for few people ever traverse its upper fields. It is almost as isolated as Reid Glacier. The summit stands out magnificently. The view was different from any we ever had had of the peak.

Turning around, there was another immense vista. Looking eastward, all Central Oregon was spread out in grand panorama. At timberline was Elk Meadows, a park reached from the southeast side and as fine to look upon as Paradise Park, directly opposite.

Feathery clouds sailed in from the west. Encountering the warm dry air of the east side of the summit of the Cascades, they melted magically and disappeared. Southward along the range were other snow caps—Jefferson and the Sisters and the minor peaks between and adjacent to these two.

From Newton Clark we swung onto Cooper Spur, known to every climber by the north side route. Its east face was ascended without trouble. Osborn knew there was a snow chute down the west side by which descent could be made to Eliot Glacier, the greatest of all the ice streams on the mountain.

The snow chute was negotiated, but here we found the glacier could not be crossed at that point, so there was another climb—a very steep one of about a quarter mile, the traveling being much like that on Reid. Eliot's crevasses, however, were much deeper and wider and the slides of rock from the cliffs were more incessant.

Crossing Eliot on a natural bridge high up under the cliffs and ascending the moraine we dropped down on the other side onto Coe Glacier by means of a rocky chute. The glacier was so badly broken up that a crossing on the lower stretches was out of the question. Another short climb was necessary and then a gradual downward course led to a point just above Barrett Spur.

Ladd Glacier was on the other side. The crossing was made without difficulty and soon afterwards, following a descent of rugged slopes, we were in camp—a glorious trip completed!

Except for the higher crossing of Reid Glacier and traveling in the opposite direction our party had followed substantially the same route around Mt. Hood taken by the Mazama party on August 7, when E. F. Peterson, leader, John Penland, Frank Redman and Robert Osborn left Camp John Lee during a dense fog late in the morning and were back in camp before nightfall. Their "pioneering" enabled us to reduce the time of the circuit to eight hours.

The Mazama Lodge

By JAMIESON PARKER

The construction of the shelter cabin at Twin Bridges marks 1923 as an important year in Mazama history. For years the need of such a structure has been felt, the principal difficulties having been doubt and differences of opinion in regard to its proper location. Perhaps it is just as well that the question was allowed ample time for consideration and discussion, for now it seems unanimously agreed that the final step was a wise one, and the location, as far as we may presently judge, is ideal from every point of view.

For some time it has been felt by the club members that our headquarters for winter trips should be in a place from which Mt. Hood, our nearest and dearest mountain, would be accessible. With the "loop" road completed as far as Government Camp, and several trips of exploration having shown the beauties of Paradise Park, on the southwest side of the mountain, and the territory stretching to the north, it seemed most fitting that we build our lodge within reach of this interesting and comparatively unexplored west side of Mt. Hood. A particular interest was attached to Paradise Park.

A comfortable winter lodge at the timber-line in Paradise Park would seem very close to the ideal, and let us hope that some day this may be achieved. When the Lodge Committee began to consider possible building sites in the Mt. Hood region, it was thought at first that a start might be made at once in the construction of a timber-line lodge; but further study brought realization of a fundamental disadvantage that such an establishment would have, namely, difficulty of access during mid-winter. The farthest point to which the Mt. Hood road is open for vehicle traffic through the winter is ordinarily Rhododendron. From Rhododendron to Twin Bridges the distance is about six miles by road, and it is another six miles by trail to Paradise Park, with a total rise in elevation from Rhododendron of about 4000 feet. It is evident that this twelve-mile climb in the soft snow, after a motor trip of at least two hours from Portland to Rhododendron, would be a strenuous undertaking even in the best of winter weather. With these thoughts in mind, the committee came to the conclusion that for present purposes there was but one logical place for a shelter cabin—at Twin Bridges, the half-way point, where the trail to Paradise Park leaves the road.

After a careful survey of the vicinity, a spot was found which lent itself admirably to all our needs. The road, after passing the second,

or easterly, bridge, follows up beside the Little Zig-Zag River, on the north bank. Across, on the south side of this pretty, turbulent stream is a nearly level bench of land, in extent about one acre, bounded on the north by the river and on the south by a steep, wooded hillside which curves to meet the stream at the east and west ends. A little west of the center of this bench, in a grove of tall firs, cedars, pines and hemlocks, the building has been set. A thick fringe of trees along the banks of the stream gives the site ample privacy from the road.

A lease from the Government, at a reasonable rental, was secured through the kind co-operation of the United States Forest Service.

The requirements of a shelter cabin are few, and the building is correspondingly simple in plan and exterior. The ground floor plan consists mainly of a living room, twenty by thirty-three feet, fronted by a verandah nine feet wide running the full length of the room. Entering the living room from the verandah, through the door in the center, the eye is met by a large and massive stone fireplace in the center of the opposite wall. Beyond, the kitchen is at the right and the wood room at the left, with doors connecting the three rooms. There are double doors between living room and kitchen, and across the opening a long serving table is arranged to roll on its pivot from beneath a counter in the kitchen. In the kitchen there are range, sink, counters, and ample shelving. The wood room is convenient to both fireplace and kitchen range, and also serves as a rear entrance vestibule to protect the kitchen from winter draughts.

From a corner of the living room an open stairway leads to the second story, which consists of one attic room, of the same size as the living room below, with storage spaces on both sides beneath the low part of the roof. The chimney passes up the wall of this room and a thimble is provided for a stove. The second floor will be used as sleeping quarters for women, the men occupying the living room below.

It was decided to use frame construction as against log walls in order to save both time and money. The rustic style is none the less in keeping with the surroundings. The exterior is covered with cedar shakes, split by hand from trees cut nearby. A layer of heavy quilt has been applied between the shiplap boarding and the shakes, which will undoubtedly be a means of conserving much heat in cold winter weather. The chimney and fireplace are of local stone. Logs form posts for the verandah.

During the course of construction it was decided by the committee that additional wood storage space would be desirable, and to this end

a lean-to has been added at the back, which, in addition to its capacity as woodshed, forms a splendid shelter for the rear entrance door.

The plumbing system is, for the present, at least, crude and incomplete, consisting only of a kitchen sink with drain pipe, and a tank for hot water heated by coils in the range. It is planned next summer to provide running water in the kitchen, and possibly toilets on both floors. The amount of work that had to be accomplished in constructing the building during the short summer season prevented a thorough investigation and economical planning of a water supply system. Preliminary inspection, however, shows that the little Zig-Zag River, which flows past the cabin, falls so rapidly that it will be necessary to go only a short distance upstream for the intake of a gravity supply. This stream, by the way, contains only a slight trace of glacial sediment, in contrast to the big Zig-Zag, which is a typical milkywhite glacial stream.

It is deeply to be regretted, but undeniable, that an unguarded cabin in the mountains must be made secure against the entrance of strangers. It would indeed be delightful if we, a society pledged to encourage the enjoyment of outdoor mountain sports, could safely maintain a hospitable shelter open to the public, but shocking examples of vandalism are convincingly numerous. We have therefore sought to make our cabin reasonably safe from intrusion, by means of heavy bolted doors and blinds over the first story windows. It is fortunate that the site is thickly screened from the road, with only here and there a glimpse of the building.

With regard to the important matter of wood supply the site could scarcely be more advantageous, as it lies in the midst of a dense forest. There is at present such a good supply of wind-falls on the ground in every direction that we will probably not be faced with the necessity of felling trees for several years to come. On the occasion of the first official club trip to the cabin, on October 6 and 7, during the course of construction, a winter's supply of wood, for both fireplace and stove, was cut and neatly piled in place by the members who attended. The removal of wind-falls has improved the appearance of the premises, and so our efforts will continue to bring two-fold results.

The amount of work accomplished on the trip just mentioned is ample evidence of what can be further done by the co-operation of willing hands. Naturally, there remain many tasks of different kinds,—principally in the matter of making the grounds more orderly and beautiful,—the performance of which will not only bring us closer to the ideal winter lodge, but will also give us the rarest joy and satisfaction—that of hard-earned creative achievement.

Photos by Philpoe

The new Mazama Lodge located on Mt. Hood Loop Road near Twin Bridges.

Reid Glacier from Pinnacle Park, Yocum Ridge.

Photo by Marshall.

The 1923 Outing—A Survey *of* Results

By John A. Lee

The Mazamas have been doing some pioneering this year—belated pioneering though it may appear to be. Even though tardy, the work they have accomplished is of importance and likely to be far-reaching in its ultimate effects. They have not discovered a new mountain but they have found new attributes, new beauties in an old and supposedly familiar one—in that very mountain, indeed, upon the summit of which in July, 1894, the club had its birth. In short, they have explored and brought to the attention of the world the whole west side of Mt. Hood.

Until the summer of this year, when the Mazamas held their annual outing on the westerly slopes of Mt. Hood, no official outing of any club had ever been held in any part of that whole region extending westerly from Government Camp on the south side of the mountain clear around to Cloud Cap Inn on the northeast side. The region had been mapped, it is true, by topographers of the United States Geological Survey, and it had been penetrated from time to time by other small groups of people, but until the fall of 1921, when the first of the preliminary trips was made that led up to the outing of this year, there had been no systematic effort at exploitation—no published account of exploration, so that to the public at large this land was a terra incognita.

It is the purpose of this article to set forth in outline the nature and extent of this pioneer work of the club and the results likely to follow. It is not proposed to recite in detail the whole story of the outing, with its many interesting incidents and personal touches. Neither are we permitted to attempt any pen pictures of the many beauties to be found in this entrancing region. These attractive fields are covered by other writers in this issue. It is our function merely to survey results, with only such references to persons and places as may be incidental to the main purpose. To this end, however, it becomes necessary, out of regard for historical accuracy, to recount briefly some preliminary happenings that led up to the Mazama outing of 1923.

Early in September, 1921, Mrs. Lee and the writer made a knapsack trip of four days' duration to Paradise Park, on the southwest side of the mountain. We went in by way of Twin Bridges, following an old sheep trail that skirted the west rim of Zig-Zag Canyon. Crossing this canyon at a point opposite Paradise Park we came out by way of

Hidden Lake and Government Camp. We explored with some thoroughness the region immediately surrounding Paradise Park and had hoped to push on westward as far as Yocum Ridge and Sandy Glacier, but bad weather prevented. A narrative of this trip, by the writer, appears in *Mazama* of that year. We were greatly impressed by what we had seen and determined that a Mazama outing ought to be held in Paradise Park.

Early in July of the year following, the Local Walks Committee of the club conducted an expedition, consisting of some fifty people, to Paradise Park. During the few days allotted to the trip the mountain was climbed, the first ascent ever made by this route, and there was also some slight reconnaisance of Reid Glacier and Sandy Canyon. Jamieson Parker contributed to *Mazama* of 1922 an accurate account of this expedition. Also in the Portland *Oregonian* of January 1, 1923, Richard W. Montague vividly describes the beauties of Paradise Park.

During the summer of 1922 the people of Hood River caught the spirit of exploration. Early in August of that year a party of five from the Hood River Post of the American Legion, led by Mark Weygandt, the veteran Mt. Hood guide, spent five days in making a high altitude circuit of Mt. Hood. A detailed account of this successful feat in mountaineering appears in the *Hood River Glacier* of August 17, 1922. Special emphasis is put on the difficulties encountered in making the crossing of Reid Glacier and this part of the narrative is indeed spectacular.

It remained for a second group of Hood River people first to bring to public notice that portion of Mt. Hood which was, in part, the objective of this year's Mazama outing. In successive trips, made in late August and early September, 1922, some mountain enthusiasts from the Oregon Nature Lovers' Club of Hood River, of whom Mr. and Mrs. F. W. Rockhold and Mr. and Mrs. C. E. Graves were leading spirits, explored the park region on the northwest side of the mountain. Names were given to many of the places they visited, four of which have been officially adopted by the United States Board of Geographic Names. Wiyeast Basin is now the official name of the broad stretch of park country lying immediately west of Barrett Spur, perpetuating in this way the old Indian name of Mt. Hood. The name Eden Park has been given to that enchanting section lying along the two branches of Ladd Creek, shut in between two high barrier ridges. To the more northerly of these ridges, that separating Wiyeast Basin from Eden Park, the name of Vista Ridge has been applied, and to the southerly barrier, the name Cathedral Ridge. A point as far south as Reid Glacier was reached by these people, though a crossing of the glacier

was not attempted. In the *Hood River News* of September 8, 1922, in the *Hood River Glacier* of September 21, 1922, and in a September, 1922, issue of the *Portland Evening Telegram*, these expeditions are well covered. In January, 1923, the Wiyeast Club of Hood River was organized, supplanting the Oregon Nature Lovers' Club. Since these trips furnished the inspiration for the organization of the Wiyeast Club, they naturally will be associated with that club.

With the information gained from these several expeditions, influenced also by the insistent, almost passionate, urgings of the officers of the Wiyeast Club, it was determined that the Mazama outing, first planned to be held in Paradise Park, should be held in both Paradise and Eden parks, with a week's time in each. This involved some problems in rapid transit of camp equipage and the crossing of Reid Glacier by a large party, which latter, if all reports were to be credited, was by no means certain of accomplishment. Summarizing the results achieved on these earlier trips, it might seem that there was little in the way of exploration left to be done. However, as will later appear, there was much interesting country that had not yet been covered. In short, it remained for the Mazamas, in their outing of 1923, to round out and complete the exploration of the west side of Mt. Hood and to carry its exploitation much farther than had hitherto been possible.

One very important result to be associated with the outing, was the building of trails. An excellent horse trail was constructed from Twin Bridges to Paradise Park. Simon Benson, with characteristic generosity and public spirit, furnished half of the funds for the building of this trail, having had the need called to his attention by Richard W. Montague, president of the club, while the other half was provided by the Forest Service. The Forest Service also, at the direction of Mr. T. H. Sherrard, superintendent of the Oregon Forest, very obligingly extended the Tony Creek-Red Mountain trail clear in to Eden Park, with a branch to Elk Cove, which branch is later to be carried as far east as Cloud Cap Inn.

A few days prior to the outing a scouting party, consisting of Richard W. Montague, Randolph Carroll, George N. Barker, Everett Philpoe and the writer, set out with the double purpose of selecting sites for the two camps and learning definitely whether it would be possible to conduct the main party across Reid Glacier; also, if the crossing of Reid Glacier should not prove feasible, to find a crossing of Sandy Canyon below the glacier. After spending a night in Paradise Park and "staking out," so to speak, the first week's camp, the party pushed on to the canyon wall bordering Reid Glacier. After some

reconnoitering, a snow chute was found that, while steep, looked safe enough, if suitable ropes should be provided. Montague, having a business engagement, was unable to go farther and regretfully returned to Portland. Carroll, much to his chagrin, became ill and he and Barker retraced their steps to camp. Philpoe and the writer, with the aid of a light rope, descended the chute and thence threaded our way up the glacier to the ice-falls, where Philpoe shot numerous views. Crossing the glacier, we climbed out onto Yocum Ridge.

Though the day was waning, we decided to explore the park on Yocum Ridge, which was virgin country, descend to Sandy River below the canyon and climb back to camp along the opposite rim. Of necessity our pace was speedy and we passed, all too swiftly, through a full mile of beautiful park country. Then came a sharp descent for another mile or two through the thickest, trippiest and most exasperating sort of tangle, and then nightfall and the stream. The river was high, too swift and too high to ford. Thence followed a groping in the dark for firewood, found scant in the rocky bed of the stream, a few hours bivouac around our camp-fire waiting for the moon to rise, the improvising of a bridge, and the laborious return to Paradise Park, which we reached shortly after day-break. It had been a fruitful day. Reid Glacier and both rims of Sandy Canyon had been explored and it had been demonstrated to a certainty that, however difficult might be the crossing of Reid Glacier for the main party, the crossing of the canyon below the glacier was even more difficult, considering the great amount of time and labor that would be required, and should not be attempted.

Carroll, still feeling indisposed and unequal to the trip that lay ahead, returned to Portland, along with Bob, his faithful shepherd, who had negotiated the snow-fields like a veteran, though despairing of opening up all the rodent burrows that he encountered. The three of us resumed our journey, after Philpoe and the writer had breakfasted and snatched a few winks of much needed sleep. A second snow chute was found, by which the descent to Reid Glacier was accomplished, not without some difficulty, since we were now burdened with considerable packs. We were buffeted with chilling blasts of wind on Reid Glacier and were enveloped in intermittent banks of fog. The outlook was not altogether promising since the route ahead was new to all of us. Hurrying on, Yocum Ridge was soon passed, thence Sandy Glacier, which consumed an hour, thence the pass in Cathedral Ridge, thence Eden Park Glacier and finally, as daylight faded, the welcoming meadows of Eden Park. The forenoon of the next day was spent reveling in the charms of Eden Park, in locating the second week's camp and in an

Photo by Philpoe.

The spectacular ice-falls of Reid Glacier, taken from near where Mazama party descended onto the glacier enroute to Eden Park.

Photo by Philpoe.

Mountaineering history in the making. First part of the Mazama route across Reid Glacier on the trip from Paradise Park to Eden Park. The party of 61 Mazamas can actually be seen against the snow of the chute down which the descent was made to the glacier.

effort to get in touch with Graves and Hoerlein, of the Wiyeast Club, whom we had expected to meet in Eden Park. We found the dead ashes of their camp-fire but were a day behind our schedule and they had departed. At three P. M. we also resumed our journey, reaching Parkdale at nine P. M., where Philpoe's parents very considerately were in waiting with their auto and—fried chicken. We had accomplished our mission and the outlook for a wonderful outing seemed bright indeed.

Of the events of the outing fitting to be classed in the category of results, few will need more than passing mention, as most of them are elsewhere amply covered. There were the two main ascents of the mountain, the one of the first week from Paradise Park and the other of the second week from Eden Park. There was the daring climb by Osborn and Manly of the west arete, duplicating the feat of Prouty and Riddell in 1912 and suggesting the possibility that, with the aid of such ropes as are used on the north and south side climbs, this third route may come into popular use; though likely, because of its steepness and the presence of much loose rock, it will not be found safe for late season climbing. There were the two marathon circuits of the mountain, breaking all speed records up to date, and serving as forerunners of many more trips of this kind that larger parties and of both sexes are almost sure to make. Probably on no other mountain can so many glaciers be traversed in so short a time and their interesting features be viewed. There was the successful crossing of Reid Glacier by a party of sixty-one, all carrying packs and many of them without previous experience in mountaineering. In the light of this accomplishment and the speedy crossing of Upper Reid Glacier in the second circuit of the mountain before referred to, Reid Glacier must henceforth cease to be a bugaboo.

There was the memorable trip to Burnt Lake, in the course of which Lost Creek was found, even though in the finding some of the finders became lost, and the trip down into Zig-Zag Canyon. Then there was the trip from Eden Park camp back to Yocum Ridge, under the leadership of the triple M triumvirate (Montague, Meredith and Marshall), which is one of the outstanding features of the outing, since on their return they did a fine bit of pioneering in exploring the great canyon of the Muddy Fork of the Sandy River, which is the fork fed by Sandy Glacier. The drop from the summit of Yocum Ridge to the floor of the canyon is both long and steep and we could well believe the leaders of the party when they reported that this descent had its thrills. A waterfall of great height, one of the finest on the mountain, leaps and cascades from the cirque of this canyon. The members of

the outing who did not at least go to the edge of this canyon and gaze down into its depths missed one of the most impressive views of the whole trip. Coe Glacier was descended, from the ice-falls clear down to its snout, Elk Cove was visited, as also were Dollar Lake and Wiyeast Basin. In truth, there was scarcely a nook or cranny at the park level, from Zig-Zag Canyon to Cooper's Spur and, at the glacier level, clear around the mountain, that some curious Mazama did not peer into.

Such were the results to be recorded in the historical annals of the outing. But these results were not all by any means. There were the bon-hommie and good fellowship in camp; the forming of fast friendships; the tearing down of much old, worn out bodily tissue and the building up of new; the brushing away of cobwebs in many a weary brain; and the rejuvenation of spirit such as nowhere, except in the high mountains, can be accomplished in so short a time. Materialistic, indeed, is he who did not, in his more reflective moments, experience a spiritual uplift, an ineffable sense of exaltation that could mean naught else than communion with the Creator. Withal, there was the keen joy that one feels just to be alive in an environment such as was ours during the full two weeks of the outing.

These are the results accomplished. What of the future? This much is plain. Henceforth Mt. Hood will have an added charm, a new dignity, in the minds both of its old admirers and those who are yet to make its acquaintance. Always and rightly considered one of the most beautiful and majestic of our snow peaks as viewed from a distance, from the west side especially, its friends will no longer be obliged to make apologies for it when seen close up. No longer will they have to make excuses for the absence of beautiful floral parks and profound canyons, which, aside from the glaciers, impress most the visitor to such peaks as Jefferson, Baker and Rainier. Nowhere on any of these mountains, at Paradise Valley, Indian Henry's or Mystic Lake on Rainier, at Austin Pass on Baker, at Jefferson Park on Jefferson, or at any of the inspiring places on any other of our snow peaks can one experience more the sublime ecstasy of poetic feeling than our own folk felt as they stood at dawn on the dome of the ridge in Paradise Park and gazed at the scene about them; or when, at eventide, they reclined in the flower-strewn meadows of Eden Park and beheld the sun spread its soft, ever-changing and indescribably beautiful alpenglow on the embattled cliffs of Mt. Hood's towering summit.

Will a road ever be constructed to Paradise Park or to Eden Park? Should such roads be built? One hesitates to take a position that might appear to savor of selfishness. Some one has well said, "There exists no selfishness above five thousand feet." At first blush, one

might well answer, the Creator has fashioned such beauty spots as these to be enjoyed by all his people and means should be provided so that all may enjoy them—those who cannot or will not hike as well as those who do. Admit this to be true. Equally fundamental is it that these products of God's handiwork should be preserved and not destroyed. Some of them, at least, should be maintained in all their pristine loveliness, unsullied and untouched by the ruthless hand of man. Can this be done if the throngs are admitted to them that will follow the coming of the auto? We know that it cannot be done, even with the most rigid and careful surveillance. The mere presence of the roads, with the unsightly cuts and fills that are inavoidable in their building through a mountainous country, will go far to destroy the sense of wildness that contributes so much to the enjoyment of these places. Nay, rather will not the beauties of these places be appreciated the more if those who would enjoy them must do so at the expense of some, even though slight, physical effort. The Wiyeast Club has already gone on record as being opposed to the building of a road to Eden Park, and so also is the writer's present view regarding both of these parks. The Mt. Hood Loop road is now within six miles of Paradise Park and, as has been shown, this interval is spanned with an excellent trail. An improved automobile road is now projected to Cloud Cap Inn; also, as has been pointed out, the trail to Elk Cove is to be extended next year to Cloud Cap Inn. When these improvements have been completed, the autoist will have only a four-mile hike to reach Eden Park. The ready accessibility of both of these parks is then well assured.

There is another road, however, that should by all means be constructed, and that is what is known as the Lolo Pass road. If this road be built, there will then be an auto thoroughfare (with the completion of the Loop Road now under construction), not two-thirds the way, but all the way around Mt. Hood. And what a scenic highway this would be! There would be nothing else like it in the United States, if in the world. But there is a serious obstacle in the way of the building of this road—the opposition of the city administration of Portland. The writer sees, or thinks he sees, forces soon to be put in operation, partly as a result of this summer's outing, that sooner or later will overcome this opposition and insure the building of the road.

The situation thus set forth in outline, as regards this projected road, is worthy of more detailed consideration, for the subject is a big one, presenting important interests seemingly adverse, but which we believe can and should be harmonized. The Bull Run Reserve, created by act of Congress in 1892, consists of two quite distinct geographical

units; first, a compact area of 182 square miles, most, though by no means all, of which is embraced within the Bull Run watershed; second, a township, 36 square miles, of land (Township 2 S., 8 E. W. M.), scarcely any of which is in the Bull Run watershed. This township projects out from the main body on the southeast, forming a panhandle, and extends well up on the slopes of Mt. Hood, almost to Paradise Park. It is separated from Bull Run watershed by a chain of high mountains. It provides practically none of Portland's water supply and could be made to furnish little, since nearly all of its waters are glacial, and that little could be furnished only at great expense. This fact has given rise to some debate as to the reasons for including this township in the Bull Run Reserve. One reason advanced, with facts adduced in support, is, that its inclusion was based upon a mistake as to the true geographical situation, due to inadequate surveys. In short, at the time the Rull Bun Reserve was established, it was thought that Bull Run Lake itself was nearly half in this township, whereas its most southerly shore line is more than a mile to the north of the township line. A map on file in the records of the Forest Service, which map was official at the time of the laying out of the reserve, shows just this mistaken geographical situation.

The Sandy River flows through the middle of this panhandle township which contains most of the upper tributaries of this stream. At the head of the most northerly of these tributaries is Lolo Pass, having an elevation of only 3200 feet, separating the watershed of the West Fork of Hood River from that of the Sandy. The valleys of these two streams furnish a natural route for a road. The points where such a road, if built, would connect with existing thoroughfares would be Zig-Zag Ranger Station, near Rhododendron, on the south, and Lost Lake, or preferably a point on the Lost Lake Road somewhat below Lost Lake, on the north. The distance between the terminals would not exceed twenty miles. Some years ago the Forest Service surveyed a road over this route, with a grade nowhere of more than five per cent and started its construction, but was stopped by the City of Portland. The Forest Service stands ready to resume the building of this road if the opposition be withdrawn. They want the road for their own purposes, aside from its use by the public.

The position of the city administration, if we interpret it correctly, is, that regardless of how it may have happened that this township was included in the reserve and regardless of whether the city may some time in the future seek to avail itself of its waters, it serves as a fire buffer to the main body of the reserve and hence the public should be excluded from it, in the future as in the past. The Forest Service

Photos by Foster, Peterson and Philpot.

Descent into and crossing of Reid Glacier. Above—Going down the ropes. Below—Mazama party on the snowfield in the right foreground.

Photos by Philpoe and Marshall

Upper—Route of the 61 Mazamas across Reid Glacier, Mt. Hood August 12, 1923. Lower left—Beneath Reid's ice-falls. Lower right—Leaving Sandy Glacier.

contends, on the other hand, that while the building of a road through any forested area enhances considerably the risk of fire, this risk is more than offset by the greater facilities for combatting a fire which the road itself affords. We believe that the Forest Service has the better of the argument. With this road constructed a force of fire-fighters could very quickly be at the scene of any fire breaking out in the easterly portion of the reserve, whereas now valuable time is lost. And it must be borne in mind that not all forest fires are set by man. Lightning causes many of them, especially in the high mountains. The road itself would serve as a barrier to fires started east of it. One man on a motorcycle could patrol the whole east border of the reserve and patrol it more effectively than is now done by numerous rangers. But admitting, for the sake of the argument, that a greater degree of diligence would be required properly to protect from fire the easterly portion of the reserve, we still contend that this road should be built—out of consideration for the great service to the public that it would afford; and in taking this position, we believe that our zeal for the cause that we are advocating has not blinded us to the necessity of protecting Portland's splendid water supply in every proper manner.

If the Lolo Pass road were built it would provide a second thoroughfare to Portland from all points in and east of the Hood River Valley. It would relieve much of the congestion on the Columbia River Highway, in the summer months especially. It would provide a shorter route to Portland from the Upper Hood River Valley. It would, as has been stated, provide a loop road all the way around Mt. Hood, completely encircling the mountain at its base—something that does not exist and is not likely soon to exist at any other of our snow peaks. The advertising possibilities of such a situation, from the standpoint of tourist travel, would be immeasurable. Having an elevation at its highest point of only 3200 feet, it would be blocked with snow a much shorter period of the year than the Loop Road around the east side, which, at one point, Bennett Pass, climbs to an altitude of 4765 feet. Its scenic attractiveness would be unsurpassed. Extending along the west bank of the Sandy River, well up on the valley slope, it would afford a close-up view of Mt. Hood at nearly all points—the impressive west side view. And how much more impressive is any mountain, how much greater appears to be its height, if viewed from across a considerable depression.

When the Loop Road around the east side of Mt. Hood is opened up to travel, as is scheduled to occur this coming summer, the first impression of the traveler will be one of wonderment at the many charms unfolded to his vision, for this road will, indeed, be a most

attractive scenic thoroughfare. Then gradually he will begin to inquire why it is that he cannot journey all the way around the mountain. He will want to know why he has not been afforded a close-up view of the side of the mountain that he sees from Portland—the side that, even though seen from afar off, has, more than any other aspect of the mountain, given to Mt. Hood its exalted standing among our snow peaks. Then will follow his agitation for the building of the Lolo Pass Road.

As the Mazamas stood this year high up on the slopes of the west side of Mt. Hood, the whole of the Bull Run Reserve lay before them as on a map. They could look down into Bull Run Lake and Lost Lake. They could follow the thread of the Sandy River and of the West Fork of Hood River. They could see the high mountain barrier that separates these streams from the Bull Run watershed. They could follow the whole course of the proposed Lolo Pass Road up and along the Sandy Valley, through Lolo Pass and down the West Fork of Hood River. They could see for themselves the feasibility and great desirability of the road and that it would not be a menace to the Bull Run watershed. They became converts to the building of the road. Others, many others, will follow the Mazamas to these high points of observation. They too will look out upon this same expanse and will likewise become convinced. The combination of these several forces will ultimately insure the building of this road. With this accomplished and with the continued exploitation of the mountain that must follow this summer's outing of the Mazamas, Mt. Hood will come into its own.

Planning *and* Equipping Mazama Outings

By MARTHA E. NILSSON

Some account of the planning and carrying out of a Mazama outing from the standpoint of the committee which has charge of the administrative details may be of interest, especially to members who have patiently put up with imperfections which seemed unnecessary.

The time and place have first to be fixed. Custom and convenience have pretty well settled upon the first two weeks of August as the time, that being the season when the fairest weather prevails in our mountains and when the majority of our members can best secure their vacations. The council, which ultimately determines the place of outing, first asks for suggestions and recommendations from the membership, then makes a choice after careful consideration of the information received.

The time and place having been decided upon, the responsibility and the work of the Outing Committee at once commence.

The accessibility of the camp-site and the contour of the surrounding country play an important part in determining the cost of the outing and the preparation required. Five tons or more of equipment must be transported over mountain trails, usually by means of pack animals. Much time and effort are spent in obtaining bids from reliable and trustworthy persons for transporting the great amount of necessary paraphernalia. When satisfactory packers have been secured, a contract, in which the cost and time of transportation are specifically fixed and set forth, is entered into.

As the prospectus must be issued before registration, experience has shown that the cost of outings for each individual may be properly based on an estimate of seventy-five persons. Since the overhead expenses are practically the same for a party of one hundred as for one of seventy-five, this allows a safe margin. All the expenses of the trip, including cost of freighting all equipment, packing, transportation of personnel, commissary, wages for the chef, his assistant and two helpers, are figured in this cost.

Having determined a reasonably accurate cost per person, the prospectus is next prepared and distributed to arouse interest in the trip. Full details of time, place, cost, and the interesting features of the region to be visited are given. Registration, with an advance payment required, is begun a month before the outing. This furnishes a safe basis for a final estimate of the number who are to go.

Next comes the heaviest task of the Outing Committee—gathering

and packing all camp equipment, dunnage and commissary for shipment. This equipment, consisting of tents, stoves, tools, cooking utensils, tableware, and the dozens of et cetera, is checked up, necessary repairs made, and any new articles purchased. Commissary supplies, varied in kind, are next bought. It may be interesting to know how much is needed for a two weeks' outing for about one hundred people. The average weight of the food is thirty-seven hundred pounds. Some of the items are as follows: 250 pounds potatoes, 200 dozen eggs, 500 pounds meat, 160 pounds preserves, 250 pounds dried fruit, two cases tomatoes, 180 pounds cereals, 200 pounds crackers, six cases canned milk, 400 pounds bread, and 150 pounds butter.

The dunnage averages four thousand pounds, each bag being weighed separately, both for the assistance of the packer in loading his horses and for checking excess dunnage. Camp equipment also weighs about eighteen hundred pounds.

All of this varied mass of material must be packed, before shipment, in receptacles and dunnage bags suitable for loading on pack horses. The ordinary pack-horse will carry a maximum of approximately one hundred and fifty pounds. Therefore, in order to balance the load, no package should weigh over seventy-five pounds. This means the handling of at least two hundred and fifty pieces. Heavy articles, such as stoves, are the take-down type, which are packed in numbered boxes so that they may be set up readily. This part of the work entails no little difficulty and requires a great deal of time.

A responsible member of the club is sent out with an experienced helper a week before the outing to select a suitable camp-site, to receive the equipment and to establish camp.

When the outing is over everything is thoroughly cleaned, repacked, shipped, and returned to storage ready for use the next year, when the whole process is again repeated by the Outing Committee.

Photos by Boychuk.

Left—Leaping falls. Note height to which water rebounds by comparison with figure in lower corner. Eight—One of many mirror pools on Sahale Plateau, Eden Park.

INCORPORATED JAN. 6, 1891.
NUMBER
21
SHARES
—1—
Oregon Alpine Club
ASSOCIATION
This Certifies, that C. H. Sholes, is the owner of
One Shares of the Capital Stock of the
Oregon Alpine Club Association,
Transferable only on the books of the Corporation in person or by attorney on the surrender of this Certificate properly endorsed.
In Witness Whereof the said Corporation has caused this Certificate to be signed by its duly authorized Officers and its Corporate Seal to be affixed at PORTLAND. this 15 day of Oct. 1893
SECRETARY
PRESIDENT
Capital, $10,000
400 Shares
$25.00 Each.

Loaned by C. H. Sholes.

Stock certificate of the Oregon Alpine Club Association, issued October 15, 1893, a predecessor of Mazama.

Thirty Years *of* Mazama Outings

By C. H. Sholes

The editor of *Mazama* has asked me to contribute for the 1923 issue "a review of Mazama activities since 1894 * * to contain mention not only of the thirty annual outings but also the community aspect of an organization like the Mazamas, etc."

The Mazamas had a glorious birth; came dangerously near but successfully avoided brain paralysis; and is now hot-footing into its fourth decade more vigorous, optimistic and useful than at any time since its first lusty year. It is a record to inspire; and right at the outset of these remarks let us acknowledge the debt due those whose vision, faith and energy resuscitated the club from its coma.

To understand the phenomenal success of the Mazamas we have to consider the times. It was a period of drab existence. Nothing had occurred for a generation to create an unusual appeal to the spiritual or physical development of the individual. Then there came an awakened sense of something lacking, something beyond the humdrum demands of daily affairs. That call to the mountains rang throughout the land like a tocsin.

Over and above this immediate interest there were two other causes to which the club's popularity may be ascribed. One was its unique requirement that membership could only be secured by ascending to the summit of a snow-peak carrying a living glacier. The fact that the Mazamas required what was probably the most difficult initiation of any club in existence was at once a challenge and an incentive to eager and ambitious souls.

The other was its name, which was a stroke of genius. It would be fact, not humor, to say that the foundation of the club's perennial growth was a pair of horns! What other name could have been devised or discovered which would so breathe the very spirit of the rattling crags? Adventure—the great heights—the appeal of danger—desire to conquer obstacles—the wide outlook—the thrill of victory—the starry depths of Heaven in midday.

Our noble prototype, the wild goat of the Cordilleran Range, known only to North and South America, may disappear before the rapacity of the killer; but the integrity and spirit of this club will persist and flourish so long as there are mountains to climb.*

* Statistics show that from 1854 to and inclusive of 1893, 654 persons had ascended Mt. Hood; that during 1894, the Mazama birth year, 326 went to the summit. During all the years prior to 1895 only 36 had ascended Mt. Adams; while in 1895, 41 persons gained its little known summit. This surprising record, due to Mazama influence *in two years only*, is indicative of all Northwest peaks from the time of their first ascent by the Mazamas.

For brevity's sake I will group the thirty outings around their respective peaks.

The birth of the organization was an event born of an inspiration unmatched in the history of mountaineering. The picture of nearly four hundred persons gathering from all quarters of the Pacific Northwest, marching on foot and with all manner of vehicle up the dusty highways and byways that converged at Mt. Hood, in July, 1894—who that was so fortunate as to be present does not love to dwell upon it! On the memorable 19th, assigned for the official climb when the organization was to be perfected on the summit, it was my privilege (having spent the night at Crater Rock) to watch from that vantage-point more than two hundred men and women rise from their slumbers at timber-line in the first streak of dawn and march in dark slender phalanxes up the white fields of snow.

For a time their advance seemed almost negligible, but hours disclosed the grim inevitability of their approach. Lightnings played over the forested foothills; thunders reverberated in long musical cadences; storm clouds swirled in vari-colored masses. That mingling of the elemental with finite resolution and determination toward a lofty achievement was a rarely impressive scene, wholly typical of the dauntless enthusiasm of the occasion.

Notwithstanding the crude arrangements, and a throng which outleapt the most enthusiastic expectations, 198 persons from Government Camp and Cloud Cap Inn attained the summit without accident, to sign the roster of charter members.

To many it was the exaltation of years; to a few the consecration of a life-time.

Official annual outings were held at Mt. Hood again in 1901, 1912 and 1923, and in recent years it has been the scene of an annual homecoming, even though the official outing was held elsewhere. Mt. Hood has always been an object of affection and held a special lure for those who live within daily view of its Gothic splendor, and the opportunity to qualify for membership with experienced guides (as many Mazamas soon became) resulted in large outing parties and many accessions to the club.

Its nearness and easy approach domesticated Mt. Hood to a degree not realized by any other mountain, which sometimes led prospective candidates to consider it "milk for babies"—an opinion rather harshly shattered during the 1901 outing, when a sudden blizzard enveloped a non-official party at Crater Rock. The collapse of two young women, one remaining unconscious for five hours until she was

safely carried to camp, resulted in one of those spectacular rescues which make Mazama history worth while.

To the Mazamas Mt. Hood is much more than a playground or a mountain to climb. It is the special repository of the Mazama spirit; and there will always be a deeper thrill, a profounder exaltation, when we foregather within its sacred precincts. In the fierce heat of modern life Mt. Hood to those who love it is a cool wayside shrine.

What then could be more appropriate than to celebrate the club's thirtieth annual outing in 1923 by dedicating to the high uses of mountain-lovers those recently discovered parks, Paradise and Eden.

Nobly and beautifully they were woven into the mountain's history.

Considering the absence of roads and trails and its little known environs, the second annual outing, held at Mt. Adams in 1895, was eminently successful. That year the first serious attempt was made to achieve something in a scientific way. Heliograph communication over a chain of snow peaks, from Mt. Baker to Diamond Peak, was the ambitious program; but untoward weather conditions defeated it. During this outing the executive committee began that course of education in the duties and qualifications of mountaineering which has resulted in a membership possessing not only a high degree of skill in making hazardous ascents but in those scarcely less important adjuncts of woodcraft and camp-life. That year was also begun publication of a semi-scientific record of club activities, now an annual institution of supreme interest and value to the membership.

Valuable contributions to mountain lore began appearing early in *Mazama* concerning the geology, flora and fauna of our Cascade mountains, measurement of altitudes, etc., by scientists of national reputation. Explorations and mapping of glacial systems, tracing the course of rivers, finding appropriate names for notable landmarks in uncharted wilds, have occupied the attention of Mazamas. In fact, hardly a feature of out-door nature but has been studied and illuminated by club members. Along historical lines there has been much pioneering work, gathering records of first ascents, collecting and verifying data, separating legend from fact, and making bibliographical lists for reference purposes.

Mt. Adams claimed two subsequent outings, the ninth in 1902, and the twentieth in 1913. In 1902 the club was still pioneering with inadequate transportation, unknown trails and all the familiar difficulties which beset large parties adventuring into new fields. It was during this outing that the Mazama treasury, never very plethoric, swelled disproportionately, due to the fact that the financial manager

of the outing, Colonel Hawkins of fragrant memory, introduced our ribs to our backbones. Nevertheless, fifty persons made the ascent amid stormy conditions, their persistence being rewarded by marvelous views as the chilling fog unexpectedly vanished.

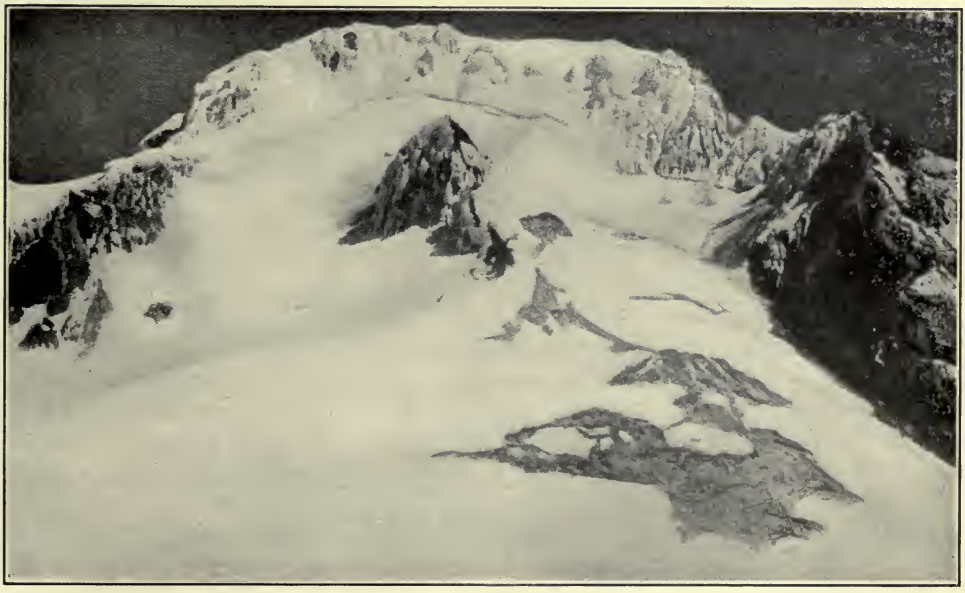
The records are silent as to the number or names of Mt. Adams' climbers in 1913; but the intervening eleven years had wrought great improvement in highways, trails and methods of conveying commissary and equipment, so that more time and energy were available for exploration and study. The three outings proved Mt. Adams one of the safest to climb, requiring only determined effort and power of endurance, although its higher slopes are often swept by terrific gales.

The third annual outing was held at Crater Lake in 1896. A side trip en route took in Mt. Pitt (so-called), to which the club was instrumental in restoring its rightful name of McLoughlin. At this outing by official invitation of the club was secured the presence of several government scientists, whose lectures and investigations during the outing was the biggest feature of an unusually interesting occasion. Upon the suggestion of W. G. Steel the name Mazama was proposed and officially adopted by the Geographic Board for the remnant of the great peak in whose huge crater lies Crater Lake.

The second outing to Crater Lake and Mt. Mazama (1921, the twenty-eighth of the series) was shared by Diamond Peak, Mt. Thielsen, and several minor peaks and the chain of lakes between Bend and Mt. Mazama. It was distinguished from all previous outings, permanent camp being abolished for a continuous hike of fifty or more miles by means of the Skyline Trail along the Cascade crest—interesting as the dividing line between a surplus and shortage of water. Such an extensive panoramic view of that wonderful region would have been quite impossible but for Mazama influence.

"The Mountain that was God." Exceeded in altitude only by Mt. Whitney (excluding Alaska), Mt. Rainier has always powerfully spurred the club's ambition, and as early as the fourth annual outing it was the mecca of our hopes (1897). This outing was shocked by the first and only fatal accident in the club's thirty years' mountaineering.* Prof. Edgar McClure, devoted member and rare personality, gave his life in the cause of science. After the official ascent had been successfully achieved and the party was descending the mountain below Gibraltar,

* Since Mazama records are silent as to the way in which Jack Meredith came to his death on Little Tahoma glacier, I have assumed that he was alone or with few companions upon his own initiative, independent of club control or guidance. This raises a very important question: Where is the limit to the club's authority over its outing members? Its gravity has apparently been foreseen by the club officers, who have year by year wisely promulgated stricter rules to govern the safety of outing parties. The dangers of mountaineering increase in inverse ratio to the number making the ascent; and since the popularity of the outings attracts large numbers, future outings should be still more carefully supervised, while restricting as little as possible individual freedom of movement on and around the mountain.



When Mazama was organized. Upper—Find the Lookout Station. Lower—Mt. Hood from the south side.

Mazama history—Eliot Glacier in other days.

the ranks were broken, and Prof. McClure having separated from his companions to find a better way, encumbered with heavy altitude measuring instruments which he would not trust to the care of anyone else, slipped and fell to instant death. In the annals of the club his record is enshrined. Men perish, but their ideals live.

The perils of mountaineering have been greatly over-estimated. Under experienced and careful leaders, of which this club has scores, it is on the whole safer than crossing a street in the congested traffic of city life. No serious accident has ever occurred while in line during a Mazama ascent. With a party of three only this might mean little; but the traditions of the Mazamas have been to include in the climbing party all who have proven fit; and when forty to a hundred men and women make a simultaneous assault upon even the mildest mannered of our loftiest peaks, no language of mine can magnify the skill, courage, confidence and vigilance hitherto manifested by each individual.

The year 1905 (year of the Lewis and Clark Exposition at Portland) is an outstanding one in Mazama activities. Besides playing host to hundreds of visitors, an invitation was extended to all mountaineering clubs to join in an outing at the greatest of all Northwest peaks, Mt. Rainier. The Sierra Club accepted, and under the management of an extraordinarily efficient Outing Committee a party of ninety-three marked the enthusiasm which has always characterized that club. The Appalachians of Boston sent fifty members to join the Mazama party, which for its own part contributed seventy-six.

That year for the first time the Mazamas sought to enlist the automobile in transportation service. They had promised the Sierrans a quick and novel trip to Mt. Hood to enable them to conquer that peak, having taken in Mt. Shasta on their way north, and a sufficient number of cars had been engaged. Youngest club members may not remember the vagaries of autos in those days, nor the lack of confidence their owners felt in their ability to perform. Most of them balked at the last minute. Fortunately the Columbia River steamers were able and willing.

Of the 209 persons representing the combined parties in Paradise Park, 112 achieved the summit of Rainier, 61 and 51 under the colors of the Sierrans and Mazamas respectively. The great success of this outing marked a notable advance in the interest and recreational value of mountaineering. The annals of the three participating clubs were enriched, and friendships formed to inspirit camp-fires from Oregon's glacier-laden peaks to New England's classic mounts, and to San Jacinto's sun-baked crown.

The two subsequent outings to Mt. Rainier, 1914 and 1919, were

if possible more fruitful of results than the other two. Club members not only knew the field of action better, they had learned the game of assault and parry, could meet hardships with smiles, threatened defeat with calmness, and discuss victory in terms positive.

The 1908 St. Helens outing stands out in bold relief, albeit St. Helens is, on its south side, one of the easiest peaks to ascend. Permanent camp was made at Spirit Lake on the north side, over whose shadowed frozen surface the climbing party ascended at so slow a pace that it was sunset before the summit was left. The thrilling descent in twilight and darkness of those twenty-six Mazamas, ten women and sixteen men, arriving at timber-line at two o'clock in the morning, was a credit to their nerve and pluck.

In the early part of this outing occurred the most thrilling rescue perhaps ever staged on an American mountain. Three inexperienced climbers not connected with the Mazamas had scaled the summit. While descending the south side one of the men suffered a broken leg from a falling rock. His comrades carried him to timber-line, from which point one of them hastened to Mazama camp for help, arriving there at 7:30 P. M. in a state of collapse. A rescue party of six Mazamas under the leadership of C. E. Forsyth made hasty preparations and sped to their relief. With George Williams, the one-armed guide, they flanked the summit on the west, crossing canyon after canyon in the darkness of night, which in daylight would have seemed impossible. About three o'clock in the morning they found the two marooned men. After a brief consultation it was unanimously agreed that escape from a situation pregnant with grave consequences to the injured man could best be accomplished by re-ascending to the summit, thence down the north side to camp, where surgical aid could be instantly had.

From 4 A. M. until 4 P. M. those six men toiled unceasingly to reach the summit with their helpless burden. In their exhausted condition they went over the cornice and down the frozen surface of the steep north side. Incredible as it may seem, they reached timber-line without accident, although for two hours they were enveloped in darkness.

The real story of this rescue has never been adequately told, never can be told, unless the participants tell it; and to them it was merely a part of the day's work! But it was one of those occasions which make the annals of this club resplendent; and I wish to set down here in heroic type the names of that rescue party:

C. E. Forsyth, *Leader*, Castle Rock, Wash.
Raymond Casebeer, Castle Rock, Wash.
L. H. Dickens, Tacoma, Wash.

HERMAN E. DOERING, Portland, Oregon.
REV. WM. J. DOUGLAS, Portland, Oregon.
CARLOS A. PENNINGTON, Seattle, Wash.
E. GEO. WILLIAMS, *Guide*, Spirit Lake, Wash.

If the spirit of Homer is ever reincarnated, the subject of his first heroic verse will be the St. Helens rescue.

A visit to the Lake Chelan region in 1899, the first ascent and naming of Mt. Sahale, brought the Mazamas into virgin fields, a chaos of rugged ranges of unsurpassed grandeur. No less than 400 snow peaks could be seen from the summit of Sahale is the statement of the historian, outclassing the famous view from the Rigi, Switzerland, with which he was familiar. This outing ended with a gasping descent of a rushing torrent, the Skagit River, in delicately balanced canoes manned by Indians.

The Glacier Peak outing (1911) entered the same group of mountains as the Chelan trip. "A greater Switzerland" was again the unanimous verdict. A region as yet unpierced by trail or highway, the primitive pack-train and the toilsome hike across a wilderness of canyons is the only means of ingress. For years it must remain a sanctuary inviolate to all but true lovers; for until airplanes can safely land upon an eagle's eyrie, even that ultra-modern method of travel can bring no globe-trotter there.

Mt. Jefferson's remoteness from settlements, absence of highways and trails, complicated the difficulties of the first outing parties in approaching this greatest, in magnitude, of our Oregon mountains. It has always been a tradition of the club that the peak selected for the outing must be scaled. In 1900 at Mt. Jefferson that tradition failed to carry on; but it must be acknowledged that the judicial ukase to the effect that on that particular occasion the base of the pinnacle be considered the summit was both wise and just. The hour was too late for even the most skillful to dare the challenge of that ice-encrusted spire. Had the intrepid thirty-seven been less reverent they might have wrested vistory from Jefferson's defiant cliffs by emulating those who crumbled the walls of Jericho.

The 1907 outing was held in the midst of financial depression, which with the difficulties above mentioned reduced the number of that party. However, four of their number scaled the pinnacle, and a week of exploration and enjoyment of Jefferson Park on the north side left imperishable pictures in the minds of all. That lofty hanging valley, the surplus waters of whose many lakes and streams plunge down awe-inspiring canyons, one to the Deschutes, the other to the Santiam, has no counterpart in Oregon or Washington.

The Three Sisters outings covering a span of twenty years vividly reflect the club's progress. Six members only comprised the first party in 1903; thirty-nine attended the second in 1910; sixty the third in 1916, the number rising to ninety-eight on the fourth outing in 1922. This surprising record is directly due to administrative efficiency. In 1903 the Outing Committee depended upon a hired contractor for transportation, who at the last moment broke his agreement. Rather than suffer defeat, a party of six, headed by R. L. Glisan (the only stag party in the club's history!) overcame all handicaps and made the ascent. Thenceforward the outing committees have managed the transportation and commissary, establishment of permanent camps, etc., and the first failure is yet to be recorded. Through their energies trails have been made where none existed, roads have been improved, packing has become an art, and that noblest of all sports has become fact instead of fancy. Abundant proof is seen in the fourth outing to the Three Sisters, when out of a party of ninety-eight, one hundred and twenty-three ascents were made; the environs were diligently explored, and the succeeding issue of the magazine is replete with the results.

When in 1896 the Mazamas stood on the summit of Mt. McLoughlin Mt. Shasta sent them an irresistible challenge. Eight busy years were to pass before we were able to accept it (August, 1904). Begun under somewhat difficult and belated circumstances, aggravated by lack of knowledge regarding climbing conditions concerning which little could be learned from local sources, the outing nevertheless yielded satisfactory results. A camp site of sylvan beauty was located at the end of wagon transportation. The route of ascent was a long and arduous one, and the indomitable persistence of those who surmounted Shasta's lofty dome was something to be admired for life.

One other picture lingers: The blind leading the blind; for two hours creeping around the outer surface of the vast crater shell near the 12,000 foot elevation, on two feet of soft snow that clung to an almost perpendicular wall—*clung*, when by all the laws of nature it should have sloughed away under the influence of a midday sun and the trampling of many feet.

In the struggle between adhesion and gravitation the mountaineer should always bet on gravitation.

Again in 1915 Mt. Shasta claimed the outing. Much had been learned in the meantime, not only about management efficiency but about the region visited. A safer and easier route of ascent was found, and thirty-six gained the coveted honor. Much valuable historic data was gathered and preserved as the result of this outing.

Life expands by contrasts. The more extensive one's field of

Mazama History—Mt. Adams.

Mazama history—Mt. Shuksan in the Mt. Baker district.

observation, the more numerous the objects for comparison, the more comprehensive and intelligent will be his conclusions regarding his relation to the universe. This is perhaps the noblest heritage bequeathed to the members of this club. It cannot be consciously sought; it comes by indirection. This alone justifies as broad a field for Mazama activities as the most ambitious members desire.

Of all our mountain peaks Mt. Baker has most persistently shaken its mailed fist at us by way of challenge. The heliographing party of 1895 failed to reach even the base of the mountain through unexplored and pathless jungles, impregnable walls barring their way. The 1906 outing on the northeast side of Baker seemed destined to failure until the "immortal six" under Kiser tunneling forty feet through the upper lip of the great bergschrund that cuts across the east side crawled up the 1500-foot ice slope. They placed the Mazama box on the summit but two days before Glisan and Lee, encircling the mountain, reached the top from the south at sunset, and perforce spent a bitter night on that gale-swept dome.

In 1909 the main body of Mazamas ascended Baker from the west side, following approximately the historic route taken by Coleman in 1868—the easiest and shortest route yet discovered. Much exploration, mapping and naming of glaciers and river systems resulted, and the effect of the temblor of 1906 in shattering Sherman Peak was also noted.

In 1920 (the twenty-seventh annual outing) a very difficult three-day ascent of Mt. Baker was made over Park Glacier from Austin Pass. Demonstrating in the most emphatic way the club's progress in efficiency of management, forty-six resolute climbers, the entire number that started from permanent camp, arrived at the summit in ample time to enjoy the outlook and return safely to camp. Signs of violent upheaval mark the Mt. Baker region, a jumble of vertical lines as far as eye can reach. As Baker carries about forty-four square miles of snow, and its glaciers are broken by more crevasses than are found on any other mountain in the Cascade Range, its wild primeval grandeur has furnished some of the finest views in our entire collection of mountain photographs.

A mountain-climbing club is in a class by itself. It does not have to buy or maintain expensive grounds for recreation, nor expend large sums for upkeep; yet so vast its field of operations, so manifold its pageants, a lifetime of devotions ends without satiety.

From the Cascade Range to the Wallowa (outing of 1918) the change was magical. Although permament camp was established within easy tramp to Eagle Cap, the principal objective, members and all

necessary outfit were landed there by automobile. Lakes, rivers, and precipitous canyons of dizzy depth hovered enchantingly near, while the dry atmosphere and brilliant sunshine united in a welcome so genial, so delightful, that the outing occupies a niche by itself in the long list of Mazama revels.

From an historical standpoint 1907 to 1912 was a lean period in our club life. Owing to adverse conditions the magazine could not be published, and a hiatus ensued which has since been but partly bridged. The efficiency and usefulness of an organization like the Mazamas is measured by the accuracy and completeness of those practical details, too often deemed tedious, without which no comprehensive review of its manifold activities can be written.

To the local walks, begun in 1908 and which became a systematic policy in 1912, continuing since as an important feature, together with attractive social diversions, and the unselfish devotion of its officers who resolved to carry on, must be attributed this glorious rejuvenescence. A club whose principal object is a two weeks' annual outing in mountain fastnesses must have an element of cohesion possessing a more universal appeal, if it expects to maintain a working membership outside of the few ultra-enthusiasts.

The influence of the Mazama organization upon society and the individual cannot be over-estimated. So long as the soul of man aspires he will climb mountains; but there are those who seem to have been hatched in swamps, and are content to breathe that miasmatic air through life; others there are whose "birth is but a sleep and a forgetting * * trailing clouds of glory." And in going to the mountains the latter do but re-ascend the glorious pathway of their descent from the Eternal Fount.

Perhaps the least noted yet most vital and significant effect of mountaineering is its influence upon character. This is not due alone to the grandeur of scenes which exalt, but to the team-work and esprit de corps which develop alertness, fertility of resource, adaptability and good humor under hardships; while in time of sudden peril there is engendered a faith and confidence which on the instant spring from hitherto unsuspected powers of the soul.

Mazama camp-fires! Wit bantering wisdom round the tables of the gods; comedy blowing iridescent bubbles at the feet of Olympus; humor healing defeat with laughter. Life-long friendships cemented, golden spurs set to flagging ambitions, aspirations and ideals revived and strengthened. Who does not cherish them! Thrice thirty years will fail to efface the impressions of Mazama camp-fires.

The Top *of the* World

By O. B. Ballou

Our train pulled out of Calcutta, India, at 4:30 P. M., February 7, 1923, for a journey to the north three hundred and sixty miles into the Himalaya Mountains to the city of Darjeeling, the "suburbs" of Mt. Everest.

The road is of standard gauge with compartment and dining car equipment. The dining car waiters go about bare-footed. About 8 P. M. we crossed the Ganges River on a long bridge. At Shillong, an hour later, we changed to a metre-gauge train.

On this metre-gauge road two people have a compartment to themselves. There were places for four, but the upper shelves are somewhat narrow. In India, travelers by rail carry their own bedding, and usually employ a servant to travel with them to take care of the baggage and other services. Those without servants can secure coolies at transfer points.

In this instance, the American Express Company furnished the bedding, all new and the first time used. A servant was assigned to take care of four compartments and our wants for the entire trip. At the hotel in Darjeeling this man built fires in our room and slept on the hall floor outside our door ready to serve us at any time.

We were up at the first break of day, watching the country which was still level and farmed. Owing to the intense heat in the middle of the day, the work is mostly done early in the morning and late in the afternoon. Many of the Hindu farm workers have costumes of white cloth wrapped about them. In the dim light of the early morning we could see the natives standing in the fields and by the road-side, like ghosts. As children we were warned of ghosts in spectral white and of frightful aspect. Ghosts are, evidently, so common in India that the ghost stories of our childhood could not be put over long. Perhaps the youths of India have some advantage over those of America after all.

At Siliguri we changed to a narrow-gauge railroad. The rails on this road are only two feet apart. A small engine of Philadelphia make is the motive power and is operated by five men, two being forward on the cow-catcher to feed sand on the rails in steep places. These men are all natives. The small coaches are from six to eight inches above the rails, and wide enough for three to sit comfortably on a seat, so far as room is concerned. It took two trains for our party of forty-three, one of three coaches and the other of four, with one baggage car of diminutive dimensions for each train.

Siliguri, the beginning point of the narrow-gauge, is 400 feet above sea-level. The first seven miles were across plains, after which we climbed rapidly. Leaving the plains we entered a jungle in which the Bengal tigers, lions and other wild animals abounded. The right of way is cleared of trees and jungle brush quite a distance back from the track on each side. This is to give an opportunity to shoot tigers or lions as they slink out of the forests before they can creep up and attack people on the trains.

After emerging from the forests our road hung to the sides of cliffs most of the way. The road was first built for a cart road, but the railroad now uses the same roadway simply by widening it and leaving room for teams side by side with the passing trains.

This narrow-gauge railroad is sixty-one miles long. Deduct seven miles of plains and four miles more where the highest point of 7407 feet is reached before descending a little to Darjeeling, and we have fifty miles left in which an altitude of 7000 feet is climbed. The distance as the crow flies is estimated at twenty miles. The road makes circles and double circles or spirals, figure eights and switchbacks innumerable. After we had puffed and snorted and rattled and banged up the sides of the cliffs in much stress, it seemed to me time enough had elapsed for us to reach the summit. Looking out I saw a sign: 2800 feet altitude! Imagine what was yet to come. Signs were posted that a speed not to exceed twelve miles per hour was permitted, and dire was the penalty for any infraction of the speed limit. I judged our speed to be about six miles most of the way. In places we could have walked across from one track to another in one-fourth the time it took the train to go the long way around.

This railroad is a wonderful piece of engineering, and one of the wonders of our trip. It was more than worth the journey if we saw nothing else. After we were well into the mountains at Darjeeling, there were no valleys whatever. At the foot of each mountain there was a rocky, rugged, narrow gulch with almost perpendicular sides. During the rainy season the floods tear down through these gulches in torrents. The towns and farms cling to the hill sides. The hills are terraced; some of the flat terraces are from two to ten feet wide, but most of them about four feet. It is said that there are 60,000 acres in tea in this region. The residents also grow their garden-stuff and other crops on these terraces.

After about six hours of strenuous climbing we reached Darjeeling. This is a summer resort where every white person in Calcutta and Bengal come to spend the summer—at least, all who can get away to escape

Photos collected by O. B. Ballou.

Above—Telephoto picture of Mt. Everest (center) from Sandakphu. Middle—Kanchenjunga, Darjeeling (telephoto). Below—Narrow gauge railroad on way to Everest district.

Photos collected by O. B. Ballou.

On the way to Mt. Everest. Above—Tibetian women at Darjeeling. Middle—Bathing ghats at Calcutta. Below—Indian funeral pyre.

the oppressive heat of the lower regions. The population of Darjeeling is from 5,000 to 10,000, according to the season.

The Mt. Everest hotel, which was to be our home, was well up on the side of a hill above the station. We entered rickshaws each manned by three coolies, two to pull and one to push. We counted twelve zigzags in the steep trail. In the afternoon more rickshaws were available for sightseeing along pathways up and down hill and along the edges of dizzy cliffs. The rickshaw men were large men from Tibet, and though very strong, it was a wonder how three of them could make the grades, as well as hold back going down. It seemed to me that it was more than three horses should be expected to do. It was like cruelty to animals, and I preferred to walk, and did a part of the time.

Darjeeling is a city of many fine homes. Much labor has been expended in rocking the streets and making stone drainage ditches and large stone retaining walls. When it rains it comes down in torrents. An Englishman told me that in the early days whole sides of the mountains would slip and kill hundreds of people. I found only one level spot in the whole city the size of a block.

There are here, as elsewhere in Oriental cities, many small shops. The merchant squats in the midst of his wares and waits on customers without moving out of his position.

Where an excavation was being made for a new building, little girls, apparently from eight to ten, were carrying the dirt away in baskets. The baskets were suspended to their backs and supported in place by bands across their foreheads. Men carried heavy loads of freight attached to straps in the same way. In one hand they had what looked like a baseball bat with a notch at one end, which, when the burden bearer stopped, was placed under the load to rest his back.

In the evening the men and women of Tibet gave a Tibetan Devil dance. They wore all sorts of most grotesque masks and costumes. The entertainment was really worth seeing—I have seen similar performances at circuses. They were all barefooted. The dancing was something like Russian dancing, also like that of the whirling Dervishes. One questions the origin of this type of dancing, Tibet having been secluded for ages.

Not only are the men of Tibet large and strong, but the women have a cast of features much like the American Indians. They have strong faces and look far more intelligent than most of the natives we have met. Large stocks of furs are carried in Darjeeling, this being the market outlet of an immense country to the north. The Mohammedans are the fur merchants.

We were called at 2:45 A. M. for a trip of seven miles to Tiger Hill to see the sun rise, and to see also, Mt. Everest, Tiger Hill being 1700 feet higher than Darjeeling. At this time of the year the clouds hover at this altitude, hiding the view of the mountains, and this additional ascent is made in the hope of getting above the clouds. When clear Mt. Everest can be seen from Tiger Hill but not from Darjeeling.

Mt. Kunchinjunga, 28,146 feet high, and much of the main Himalaya range can be plainly seen from Darjeeling on clear days. A man at one of the eating stations on the way up volunteered the information that the mountains had not been seen for three weeks. The Mt. Everest hotel manager said they had not been seen for four days; that our chance of seeing the mountains was one in ten. Some tourists had gone to Tiger Hill the morning before and failed.

We had little hope but started out at 3:30 A. M. We had a choice of three means of transportation: horses, rickshaws or by dandy. The latter is a chair built like a bath tub. Ordinarily there are four men to a dandy, but on this trip there were five who carried it by resting pole handles on the coolies' shoulders. There were four and five men to each richshaw; two to pull and the others to push. I think I drew the strongest team of rickshaw men in the lot; it was my turn, however, as on quite a few other trips the coolies had played out on me.

On the way we were frequently in and out of the clouds. These changes were very rapid. Near the top of Tiger Hill the ascent is steep and all walked except one woman, whom it took nine men to wheel up in a rickshaw. At the top was built a platform as a vantage point to view the mountains. We found ourselves above a sea of clouds but still others obscured the main range. We had little hope, but after a while the clouds lifted and the Himalayas came forth in all their massive grandeur.

It was our good fortune to gaze upon the very top of the world.

For a long time we watched the snowy range and the changing clouds. The latter it seemed made almost instant changes; one moment the mountains in view and the next hidden, to be repeated again and again. Less than fifty miles away was Mt. Kunchinjunga and part of the main range. Off to the left was Mt. Everest, 29,000 feet in elevation, but seeming smaller than the other peaks, as it was farther away.

Our Mazama friend and world-renowned mountain climber, Rodney L. Glisan, was in his element flying about trying to secure pictures of local color and of the distant peaks. If he succeeded in getting views of the mighty snow range he did better than the rest of us, as our ordinary kodaks failed to penetrate the fifty miles or more

of dense atmosphere, and in the finishing, much to our disappointment, all that developed in the picture was the foreground.

We have all read of the various attempts to reach the summit of Mt. Everest. Twelve Europeans under the leadership of Gen. C. G. Bruce set out from Darjeeling March 26, 1922, and made three unsuccessful attempts to reach Mt. Everest's unconquered peak. The highest point gained was 27,235 feet, leaving them about 1600 feet short of the hoped-for goal. May we hope that the next expedition will succeed.

At Calcutta, one of the hottest places in India, the least clothing we could get by the censor with, seemed more than we needed, while at Tiger Hill it took all our winter wardrobe, and some with an additional blanket wrapped about, to make us comfortable.

We made good speed back to the hotel and breakfast, all elated at our good fortune. The clouds had lifted and Mt. Kunchinjunga could now be plainly seen for several hours from the hotel. More sightseeing, and then off at 2 P. M. we departed on our rattling friend, the narrow-gauge. Another night on the metre-gauge sleeper, changed to standard gauge at 5 A. M., passed through Calcutta about noon for Diamond Harbor, reaching our boat in time to sail with the tide at 3 P. M. As we came aboard there was a medical examination; the doctors took a good look at us, felt our pulse and we got by.

The two parties that went to Benares have weird stories to tell of the things they saw. It was a disappointment that we could not visit Benares also, but of three places: Ceylon, Darjeeling and Benares, two only could be seen owing to lack of time. There were parties for each of these combinations of two; at least, we can exchange accounts of our experiences. Benares, the holy city of India, is on the banks of the sacred River Ganges, the waters of which are believed to cure every ill. To bathe in the river before death insures its devotees the fullfilment of every wish in the hereafter. Thousands of pilgrims come daily from all over India to bathe and drink the waters of the Ganges.

The Hindus burn their dead at the burning ghats, meaning landing stairs, on the river banks. We visited those at Calcutta, where about sixty-five a day are burned, and saw the bodies in all the stages of incineration. We saw one funeral pyre lighted. There is quite a ceremony that goes with these rites, and as the ghats at Benares are more representative, we will describe the ceremony as it takes place there.

The bodies are brought down to the river strapped to two bamboo poles and carried by four men. If a woman, the body is covered with a red cloth, if a man, a white cloth. First the body is dipped in the Ganges; then each relative puts water in the mouth of the deceased.

Then the husband, or nearest relative, goes and bargains for wood of a wood dealer near by. There is much wrangling over the price.

In our country the station in life or the importance of the departed is ofttimes indicated by the scale of expenditure for the casket and funeral rites. In India the poor and the wealthy are distinguished one from the other by the amount expended for wood for the funeral pyre. The poor man may consume two or three dollars worth of wood in his hectic taking off, while for the final spectacular torch-light departure of the aristocrat, two or three hundred dollars is spent in financing the purchase of dry kindling and best second-growth, and the wood dealer and the undertaker count proportionate gains.

After the wood is piled and the body placed upon it, and covered with more wood, the husband or nearest relative has his head shaved. Then he lights a bundle of straw which he carries in his hand, walking five times around the body, holding the blaze to the mouth of the dead for an instant each time; then lighting the funeral pyre he departs, leaving the body to burn to ashes, which are then thrown into the river together with any parts not fully incinerated. In case of a poor family which does not have rupees enough to buy wood the body is thrown into the river to furnish food for buzzards or crocodiles. It is said that during the flu epidemic thousands were thrown into the river.

One body while lashed to the bamboo poles, and while being dipped in the water, moved its head from side to side and rolled its eyes in feeble protest or approval, according to its state of mind. Evidently the relatives saw no reason for delaying the last rites as the victim was too far gone for effective resistance.

Our next port of call was Ceylon.

The 1908 Perilous Ascent *of* St. Helens

By C. H. Sholes

Preparatory to an ascent in the morning a night spent at timberline, with the mountain lifting its jeweled summit several thousand feet above one's pillow, invites communion with infinite wonders and brooding terrors. Sleep in banished. The roar of avalanches, distant mutterings of glacier or snow-field adjusting itself to its granite bed, the crash of falling rocks, or boulders grinding in glacial torrents, all serve to keep the senses alert.

Threatening rock-masses frost-hung in delicate poise; crevasses whose cleft walls lured with marvelous colors and echoed the weird music of abysmal waters; snow-bridges that carried one safely over dizzy depths and then succumbed to the weight of a sunbeam: These are pictures that haunt the memory, hold the imagination in their grasp, and launch the would-be sleeper willy nilly upon trial climbs full of miraculous escapes; while a voice of lamentation in the moaning wind proclaims a place of desolation "where no one comes or hath come since the making of the world."

But all these fearsome visions disappear with the auroral outburst, when the great peak glows like a cameo carved from a field of azure. Amid the blazing splendor of such a scene all else terrestrial fades into insignificance. The mountain seems less high, less steep, less dangerous, by contrast with the night's fantasies. Sparkling in the mild beams of morning it spreads submissively to our feet an easy conquest. Seraphita-like we impatiently await command to soar to its summit.

So when a party of Mazamas left the Camp of the Stars one August morning in 1908 for the summit of St. Helens they little dreamed they were entering upon one of the most thrilling experiences that ever befell a party of mountaineers.

From their bivouac on a high ridge whose ragged mantle of dwarfed shrubbery emphasized its bleakness rather than afforded shelter, they descended to the floor of the canyon where the narrow tongue of a glacier which had been thrust down the mountain far below the usual summer snow-line gave solid footing, and on its corrugated incline they mounted easily to the snow-fields which flowed in vast billows to the summit.

The party numbered thirty-five, and in climbing costume, alpenstocks in hand, with faces painted grotesquely and eyes globed with colored glasses to filter the sun's reflected brilliance, the motley line

looked to the distant camp-watchers very like a bit of wind-blown heather as it wound slowly upward amid the gigantic sculpture of the mountain.

With so many, progress was necessarily as well as wisely slow. On a steep north slope the snow does not thaw until midday. Here and there an open crevasse was rounded, and suspected hidden ones circumspectly guarded against, so that constant vigilance was required of all. Not until two o'clock was a possible lunching place reached. A sun-warmed moraine with massive boulders for wind-breaks offered a tempting resort, and the order was given to take to the ridge.

Easily said, but far from easily done. The sun's heat radiating from the rocks day after day had melted the snow that once clung to them exposing a gap of considerable width and depth, now partially but insecurely bridged by an overhanging snow-crust. To complicate the situation the morainal wall was deceivingly steep and cluttered with boulders needing but a touch to dislodge. Unbelievable as it must seem to an outsider, more than an hour was consumed in making this transfer. After a scant half-hour for rest and refreshment the ascent was continued along the ridge.

The party was now approaching the height where glaciers are born of the ever-avalanching, ever-replenished dome snows, birthplace of winds and storms. Pinnacles of rock slowly but surely disintegrating in the elemental stress now and again discharged showers of fragments with the rattle of artillery; huge blocks of ice and snow, freed from an ice-cliff by midday heat, fell with muffled roar; snow-filled basins near the brow of some canyon wall sent flashing rivulets down giddy heights, too distant for the climbers to hear the sound or even to see the motion of their swift descent; and from multicolored cliffs, spires and jumbled seracs the sun's rays were reflected with blinding radiance.

Soon after four o'clock several of the inexperienced and less physically capable members fell behind, and doubting their ability to reach the summit before sundown wisely decided to return to Camp of the Stars before darkness fell. Even the stronger contingent, then half a mile ahead and steadily advancing could hardly do better than that; but they were physically fit, the weather was faultless, and the lateness of the hour awakened no doubt to daunt their valiant spirits.

Breezes from summit expanses descending
Whispered of glories the tongue could not speak;
Scenes of wild grandeur and bleakness unending
Lured irresistibly on to the peak.
Yawning crevasses,
Shelterless passes,

Perils and hardships are spurs to the spirit
Fearlessly glancing
O'er the entrancing
Sky-piercing peaks Mazamas inherit.

One of the leaders forging ahead to select the best route found the last pitch below the dome so precipitous and icy that it could not be safely negotiated without cutting steps a distance of four hundred feet. This arduous task he accomplished, besides crossing the summit and signing the register while the others lunched and ascended the ridge. Returning he descended to the foot of the ice-slope to assist and hasten the others. Had not this step-cutting been done before the main party arrived the ascent would have ended right there; but no delay being caused at this crucial point, in the buoyancy of victory almost realized, they pushed up the steep slope with thoughtless enthusiasm. Surmounting the cornice of the dome they found themselves upon a level snowfield a half-mile in extent, at the farther side of which, upon a jutting crag, the Mazama registry box was cached.

The moment they reached the summit Mr. Lee warned them of the unseasonable hour, and urged them to return quickly in order to descend the ice-ladder before the light waned; but the intoxication of the mountain-top was in their blood, and the restful walk across the level dome, with unobstructed view in every direction, lulled them into a sense of security. They found the precious record, leisurely inscribed their names, made a few brief records, sang songs, and enjoyed the glorious outlook. Even the leader (peace to his ashes) must have momentarily forgotten the danger of a twilight descent over the treacherous ice-slope. But to him who waited there contemplating that dizzy flight, chilling from long inaction after the heat of toil, watching the sun sink with visible speed, the minutes seemed hours. At last his imperative commands brought them posthaste.

The premonition of danger by the few became imminent to all when elated with victory they came to a halt at the brink of what then seemed a frightful declivity. The moment the sun nears the horizon its ineffectual beams give color but no warmth to a snow-peak; the mercury begins to fall with startling rapidity, and every additional degree of cold doubles the hazard of descent, always far more difficult and dangerous than the ascent. An ice-crust was already forming, and pieces dislodged by the feet of those on the edge of the slope slid away with a disconcertingly suggestive speed. Nothing is more disturbing to the nerve of the novice than these exhibitions of the fate which awaits a misstep. Instant action was necessary, and every one without needless alarm was cautioned to silence and unhesitating obedience to orders.

Two hours before their uppermost thought was—

> Then on and upward, we'll stand on the summit,
> Carving its beauty from blue of the sky;

but now it seemed

> Miles to our camp, straight down as a plummet,
> Startling to cast but the beam of an eye.

Even the horizon seemed to drop away with all the foreground into a fathomless abyss; as the sun had gone down the earth seemed to have risen like the opposite end of a teeter-board; and to coast down a ray of the setting sun seemed easily possible. To lose one's footing there was to slip and slide and fall clear over the rim of the world. These disconcerting thoughts came unbidden to the minds of all, while the leaders ran out the hundred-foot life-line and temporarily but securely anchored it at the upper end. Then filing slowly down backward over the perilous stairway, placing their feet with infinite care in the ice-clefts, they came to a halt on the lower fifty feet of the rope, which was then moved fifty feet farther down, and again anchored for another similar advance.

The hard packed mingled snow and ice which fell from the cornice of the comparatively level dome bulged out with so sharp a curve that persons at opposite ends of the rope were invisible to each other. If that nerve-trying situation had any disquieting effect upon those in the rear as they saw their companions drop out of sight, they did not betray it. While they were thus waiting for the rope to be advanced and anchored the second time, clinging to the ice-wall like a dark cascade suspended in mid-air, the sun dipped below the horizon.

Eight times the rope was lowered and anchored; eight times the party of twenty-six for what seemed an age waited unaided by the life-line while the latter was being moved, hardly daring to take a full breath lest a foot should slip, and then obedient to command they silently descended another fifty feet, their gaze riveted to those precarious steps in the ice, or casting furtive glances from the luminous horizon into the fast darkening depths below.

For a party of five or six skilled mountaineers it was an experience to revel in and enjoy; but for more than a score, a third of whom were women, many making their first ascent, in retrospect it seems almost appalling. Certainly for one hour, under conditions which made it seem an eternity, not one of them knew whether he was participating in a unique and thrilling adventure or in an awful catastrophe. A single misstep, an instant of hysteria on the part of one, would almost inevitably have caused the entire party to glissade down the glassy slope upon the rocks or into the Arctic gloom of a crevasse. (*)

They reached the foot of the ice-slope safely. There was no pause for congratulation or exultation over what had been done. The spirit of the mountaineer is keyed to the altitude wherein he works, and he performs feats with utmost nonchalance which make him shudder when memory reviews them in the city. The responsibility of the leaders for the safety of the party made them feel as if they had transferred the weight of the mountain itself from their shoulders back to its own rock-ribbed foundations. In comparison with what had preceded, the remainder of the descent presented no obstacles which care and diligence could not overcome, even in the twilight which now enveloped them. The alpenglow lingered on the white dome, which loomed clear, cold and forbidding against the starlit sky; but down in the forested foothills, along the canyons, gorges and high barren ridges, darkness blurred the landscape.

Suddenly their sight was arrested and cheered by a light twinkling thousands of feet below. As it grew in size and brightness tongues of flame leaped up and beckoned them, and they knew it for the camp signal of their comrades who had turned back, wakeful and anxious, and greeted it with welcoming shouts. Its friendly light augmented by reflecting ridges, by snow-field and glacier crystals, by walls and spires of rock, cheered and guided them as they laboriously descended the uncharted vastness of the mountain-side.

Success was achieved through the skill and calm courage of a few experienced men, supreme confidence in whom inspired their companions to remarkable self-possession. One young lady who was making her first ascent voiced the sentiment of all in recounting her experience at the camp-fire: "If the leaders had told us to walk a tight rope across a crevasse we would have obeyed without a word." In the party was a lad of nine years, with his father, and his cheerful if somewhat solicitous question while descending the icy stairway, "Are you all right, daddy?" will never be forgotten by those who heard it, and may have had—who knows?—an unimagined influence at a time when human destiny was in the keeping of something beyond physical ability.

At two o'clock in the morning the last one of the successful climbers arrived in the Camp of the Stars, having been on foot continuously for nineteen hours. Not an accident or mishap had occurred, and even weariness was for the moment submerged in elation over the happy termination of an experience which they all agreed they would not part with for the world, nor repeat for anything less than a life's ransom.

* I state the number of women merely as an interesting fact, and in no least derogatory or apologetic sense. On the contrary, I wish to bear witness to the truth that the women of the club have always, within the limits of their physical ability, proved themselves the equal of men in climbing; and in those higher qualities of courage, patient endurance and calmness in the face of danger, both sexes stand on the same plane. No other occasion within my knowledge ever demands an equal exhibition of the power of mind over matter.

Eating Up Forest Fires

By C. E. RACHFORD,
U. S. Forest Service, Washington, D. C.

Forest fires are the greatest menace to timber production. It is the problem demanding solution before other intensive methods of forestry can be applied. Its solution is part and parcel of forestry methods. There was a time in the West when the public was little concerned if the valleys and cities were filled with smoke resulting from immense forest fires in the surrounding timbered regions. Aside from the spectacular feature, little thought was given to the resulting damage and economic waste. But an enlightened public opinion is now demanding the prevention of this waste. Its prevention, however, depends largely upon the extent to which the public will go with their demands, the interest the individual has in the prevention of forest fires and the means of control which can be exercised by those who are responsible for administering forest lands. The problem of control of forest fires, therefore, becomes so important that the timber owner or the forester can well afford to take advantage of every means no matter how small.

That the problem is a local one, as well as national, may be more fully recognized by the following figures: During the past seven years an average of 3132 fires per year have occurred in the States of Oregon and Washington, burning over an average of 454,390 acres and destroying timber and other values of $1,195,903.00.

Regulated grazing of domestic livestock, sheep and cattle, has been acknowledged as having an influence in fire control. On the other hand, unregulated or uncontrolled grazing is destructive to forest interests, and the injuries from grazing in the earlier days of unrestricted competition far outweighed the benefits derived.

Much thought has been given this matter in the development of grazing plans so as to secure the greatest protective value. In recognizing this value, general injury to the timber reproduction or other resources cannot be condoned on the ground that the injury is more than compensated by the reduction of fire hazard; therefore, an objective in grazing management plans is to secure full use of the forage resources by a reduction of the fire hazard without injury to other resources. The benefits of grazing in reducing the fire hazard may be briefly summarized as follows: (1) keeping fires from starting; (2) keeping fires from spreading; and (3) rendering fires less destructive.

The utilization by livestock of herbaceous vegetation reduces the

material which becomes inflammable and if left on the ground increases the fire hazard. In other words the livestock "eat up" the material which would otherwise have become a menace to the forest. The experience of forest rangers and others has shown that fires spread more slowly on grazed than on ungrazed areas. This is the result of the breaking up of the litter by trampling of the stock, pulverizing it and mixing it with the mineral soil and forming efficient small fire lines by the constant trailing of the stock. Under such conditions the progress of fire is materially retarded and the intensity with which a fire might otherwise have burned is lessened. Furthermore, the grazing of livestock on the National Forests is of economic importance. Agricultural valley lands are in many cases entirely dependent upon livestock for their proper development and use. The National Forests in the States of Oregon and Washington supplied summer feed during 1922 for 177,626 cattle and horses and 857,638 sheep and goats owned by 3530 permitees. In addition to the influence that the presence of livestock has in reducing the fire hazard, the presence of these 3530 persons in charge of stock while on the summer range furnishes an excellent and loyal fire force for the prevention and suppression of fires. Many fires have been reported by these users of the National Forests. Others have been controlled and extinguished without reporting to Forest officers, and on still others a large amount of labor has been expended by permitees in the suppression of forest fires. The grazing permittees therefore become an important part of any fire organization on the National Forests.

While the utilization of the forest resources is important from both an economic and fire control standpoint the interests of other resources are not overlooked. The value of the National Forests for recreation purposes is fully recognized. No plan of grazing management is considered complete unless it has given due consideration to the needs of the traveling public. It is the ideal of all such plans to make the mountain ranges as attractive and useful as they can be made, and to provide for the comfort and enjoyment of the traveling public. Areas are reserved for the use of pack stock, desirable camping places selected and improved. While the importance of grazing on the National Forests, as already stated, is fully recognized, the aesthetic value of our mountains has not been lost sight of. Rugged cliffs and mountains alone do not make for the happiest and most enjoyable vacation in the mountains, but the sides of mountains and valleys blazing forth in the variegated colors of wild flowers, plus comfortable camping places and adequate horse feed, with a good supply of uncontaminated mountain water, are requisites to an enjoyable trip in the mountains. It

is of course not denied that stock eat some of the wild flowers, but since the opening date of the grazing season is so regulated that the utilization of the range at a time when most of the wild flowers have reached seed maturity and are on the wane, there is little danger of destroying these plants entirely. As for example: the Mountain Lily, Tiger Lily, Mertensia, Trillium, Iris, the Violets, blue, yellow and purple, of which there are a number of species, although rarely grazed by livestock, mature early and disseminate their seed early in July.

Furthermore, many of the most beautiful flowers are not eaten by livestock, among which may be mentioned the Pyrolas, Marigold, Rhododendron, Everlasting, Beargrass, Monkey Flower, Beard-tongue, Fleabane, Indian Hemp, Bluebell, Lupine of several species, Lousewort, the several heathers, and many others.

Of the Compositae family, the Asters, Eriogonums, Golden Asters, Golden-rod, Black-eyed Susans and many others of this group, which grow in masses, their vivid colors so conspicuous later in season, are rarely eaten by livestock, but the movement of the latter over the range has assisted nature materially in re-seeding and distributing these species.

In conclusion it may be said that the grazing of livestock on the National Forests is an important part of the whole forestry problem. It can and should be used as a means of control of forest fires. It constitutes a very valuable resource on which communities are dependent and its utilization can be secured without injury to other resources.

Mazama history—Mt. Rainier.

Mt. Washington conquered! Upper left—The pinnacle looking south from hog-back. Upper right—The Bend party on summit. Lower left—McNeal picks out the route. Lower right—McNeal, Sellers, Watkins and Harryman preparing account on summit to enter in the tube.

The Conquest *of* Mt. Washington*

By Ronald Sellars

The ascent of a difficult mountain peak, especially a peak which has defied party after party over a period of years, offers to a lover of the mountains an almost irresistible attraction. The sight of a gigantic pinnacle, upon which no man has ever set foot, is indeed an inspiring one. In these features of awesome ruggedness and of mysterious attraction, perhaps no other mountain in the Northwest presents a more interesting spectacle than does Mt. Washington.

Having climbed in almost consecutive succession the peaks of Bachelor, Broken Top, South Sister and North Sister, and having had our interest and curiosity aroused by persistent reports that the pinnacle of Washington was virtually impossible to scale, our party of six unanimously agreed that here was a rare field for an attempt. Arrangements were consequently made and everything in the way of mountain-climbing equipment that could be secured was provided, that the attempt might end in success.

On Saturday evening, August 25, our party, consisting of Ervin McNeal, Phil Philbrook, Armin Furrer, Wilbur Watkins, Leo Harryman and the writer, set out for the ranger station at Big Lake. Due to a mistake in arrangements it was necessary to secure a Ford truck as a means of transportation, which, with a late start gave promise of the none too cheerful prospect of an all-night ride over the rough roads of the Santiam Pass.

It was, therefore, one o'clock in the morning before we reached the summit of the pass, and there, for the first time, we beheld the magnificent spectacle of Washington—the unconquered, sharply outlined against a moonlit sky. It was indeed beautiful, and the waning spirits of the somewhat disgruntled party were quickly rejuvenated. From the summit around to the Big Lake ranger station is a comparatively short distance, and we arrived at 1:30 A. M., quite ready to retire for the few hours of sleep that could be obtained before dawn.

Seven o'clock Sunday morning found the party ready to start. Emergency rations of pineapple, soup, raisins and chocolate had been prepared. We were also provided with canteens of water and 275 feet of one-half inch rope, which we divided into three lengths, that it might be more easily carried.

(*Editor's Note.—The outstanding mountaineering accomplishment in Oregon for 1923 is the record established by six Central Oregon young men in making first ascents of Mt. Washington and Three-Fingered Jack; climbing a pinnacle of Broken Top, hitherto scaled only by H. H. Prouty in 1916—and that of ascending the North Sister. The accompanying article describes the ascents of Mt. Washington and the North Sister. The dates of the other climbs were: Broken Top, August 5, and Three-Fingered Jack, September 3.)

We had studied out a route as best we could from such a distance with the aid of a pair of binoculars, and concluded that our best route would be to follow the shore of the lake to the south, thence up through the burn to the north shoulder of the mountain. This distance was perhaps five miles, and none too easily negotiated. Frequent stops were made, and at each rest each member of the party surveyed the mountain and gave an opinion as to the best method of ascent.

We reached the hog-back at about nine-thirty and seeing that this was a direct route to the north base of the pinnacle, which we had agreed to attempt first, we ascended the mountain over it, each member of the party choosing his own route and setting his own pace. At eleven o'clock we were at the base of the pinnacle where we found the old rusty can in a cairn of stones, containing the names of Ed Peterson, Robert Osborn, Frank Redman and John Penland, members of the Mazama party which attempted the climb in 1922.

An hour or more was spent here in a discussion as to the accessibility of the pinnacle in general. Here, also, we ate our rations and drank almost the last of our water, there having been little snow on the mountain in any place along our route from which to replenish our supply. At this point we were also deprived of our binoculars when they very unceremoniously rolled down the west side of the slope to the bottom of the mountain. Some time was spent in an effort to recover them, but it was not until our descent that we found them among the rocks, hopelessly battered and utterly ruined.

At twelve-thirty, McNeal, who had given the rock chimney on the northeast side of the pinnacle a preliminary inspection, announced that he would attempt the ascent at that point, following in general the route of the Peterson party of 1922, but going a little to the left. Having wrapped the rope around his waist he worked his way along the ledge which leads toward the left and around to the chimney—here the mountain drops under and down for a good 900 feet. As he worked his way around into the chimney and out of sight, although not fully aware of his danger, we who were waiting found it impossible to watch his progress. It was perhaps ten minutes before McNeal reappeared, during which time a silence which amounted almost to a nervous tension hung over those of us who were below. The chimney is about eighty feet high and McNeal appeared on a promontory about 100 feet above us, and offered to string the rope down the chimney. We agreed, however, that he should first go on to the top, in order to see whether or not the remainder of the climb was possible. He made the remaining 400 or 500 feet in twenty-five minutes, which was in itself an evidence of the possibility of the feat. While on the top he also inspected the

south side to see whether or not it might be more feasible, as had been suggested by Penland the previous year. He concluded that it was no easier, however, and started to descend, that he might advise those of us who remained as to the best means of negotiating the chimney.

At this junction Harryman, who was apparently anxious to have the ordeal over with, started to ascend the chimney in a somewhat hasty manner. As before, all was silence for a period, a silence which was rudely disturbed at intervals by small avalanches of falling rocks which thundered ominously down the chimney to be crushed into thousands of tiny fragments, hundreds of feet below. Harryman eventually appeared at the top of the chimney above us, and seemed at first glance to have lost all trace of color. Upon being questioned as to the cause of his sudden change of complexion, he informed us that he had lost his hold in the chimney and had slipped for a distance of six inches, escaping a fatal plunge down the cliff only by the fact that his foot struck a soft ledge, perhaps not more than two inches wide. Needless to say this added greatly to the confidence of those of us who still had the climb before us!

Next in line came Philbrook, who made the climb without mishap. Closely following came Furrer, then Watkins, and finally myself, carrying two cameras and numerous apprehensions. The whole party negotiated the remainder of the climb without incident, in time ranging from twenty-five to forty-five minutes. The climb up the pinnacle is not extremely dangerous although the chances are that a fall of any length would end disastrously, as the whole cone is composed of loosely piled rock which avalanches down the cliffs upon the slightest pressure. It is advisable to test thoroughly each handhold and foothold before trusting weight upon it.

Arrived on the top we spent a few minutes in admiring the surrounding landscape. On the south were the scenes of previous conquests, the Three Sisters, Broken Top and Bachelor, and in the more immediate foreground, Black and Belknap Craters and the broad rolling lava fields around the McKenzie Pass. On the east could be seen the wheat fields of Central Oregon, with Black Butte as a guardian sentinel, piercing skyward through a mantle of mist. To the north were Three-Fingered Jack, the last and greatest of the unconquered peaks, and Jefferson, another of those giant skeletons of the Cascades which presents a difficult, although possible, ascent. Extending off into hazy obscurity to the west we could see the ranges of hills which make up the Cascade and Coast ranges, and interspersed among them, a seemingly countless number of lakes.

A peculiarity which we noticed in connection with the summit of

Washington was the presence of swarms of large red and black flying ants. These swarms did not extend over ten feet down from the extreme pinnacles, but here they were so numerous as to make our stay uncomfortable.

In spite of the ants, however, we prepared our tube, which we left on top containing our names. This tube, an invention of our own, is made of heavy brass pipe, one end of the tube being sealed while the other is fitted with a cap which may be screwed on tightly. This end was provided with a rubber gasket and washer to prevent corrosion and the tube will undoubtedly withstand the weather for ten or fifteen years.

Each member of the party left some small article to be returned to him by future climbers and a brief account was written by McNeal and signed by the other members of the party. We then erected a cairn of stones, some ten feet to the east of the extreme pinnacle and buried the tube among the rocks. It is quite well marked and I am sure that future climbers will experience little difficulty in discovering it.

The descent of a pinnacle is quite often as hazardous as its ascent and being aware of this, we proceeded very leisurely down the pinnacle to the top of the 80-foot chimney, the only really dangerous part of the climb. Arrived here we secured a 90-foot line around a boulder and McNeal, who had elected himself to be the last to descend, anchored himself and held the rope as an additional precaution.

Most of us had anticipated the descent quite apprehensively, but it proved rather more thrilling than dangerous. The added security of the rope gave each of us an opportunity to view the features of the cliff up which we had climbed. After thoroughly testing the rope and its fastenings McNeal descended. Just how safely the rope was fastened above we soon found out when it defied all of our efforts to loosen it. It still hangs down the chimney and would probably be safe to use in a limited way even next year. It would be unwise, however, for any climber to trust his whole weight to such a support.

This 80-foot chimney on the northeast side of the pinnacle presents the only real difficulty of the climb. It is composed of loose rock in several spots where one might try to secure footholds, but for the most part it has a smooth appearance. The face of the rock is composed of small knobs or "warts" of soft, crumbly rock, some of which offer firm holds on which to brace. There are very few real footholds, the climb requiring a steady, bracing tension of the body against the rocky side of the chimney.

The North Sister, which we also climbed, although a comparatively accessible peak, holds the distinction of having been successfully

Even Three-Fingered Jack held no terrors for the Bend party, September 3, 1923. Upper left—McNeal carries the rope up the chimney. Upper right—Nearing the top. Lower left—Philbrook negotiates dangerous rock work on "Jack" climb. Lower right—Arriving at the summit.

Upper left and right—Bend party climbing Prouty Pinnacle, top of North Sister, August 12, 1923. Lower left—McNeal near summit of Mt. Washington. Lower right—Watkins, Philbrook and McNeal in chute on Mt. Washington, August 26, 1923.

scaled by fewer mountaineers than perhaps any of the other peaks in the Cascades in the regions commonly covered by climbing parties. Differing radically in contour, and formation from either the South or Middle Sister, the North Sister presents an aspect at once awesome and beautiful. Seen from a distance in winter time, covered with a mantle of snow, its rugged beauty is incomparable, but when viewed from the head of Collier Glacier on the west side, it is the most inhospitable looking rock-mass that the writer has ever seen.

The Mazama of 1912, 1916 and 1922 recount very well the climbs of successful parties and also give a fairly detailed description of the difficulties to be overcome. These accounts, together with an account in the *Oregonian* of August 5, relating the climb of W. H. Wier on August 29, 1914, were perhaps the motive forces behind the climb, by our party of nine, from Bend. Wier's colorful account of his climb, alone, of the Middle and North Sisters, together with the opinions given out by several well-known Mazamas of previous climbs, that the ascent of the peak would eventually become an impossibility, held promise of adventure rarely to be found so close at hand.

Our party of nine left Bend, Saturday, August 11, camped at Sparks Lake for the night and left early Sunday morning for the object of the day's climb. The route along the base of the South Sister was exceedingly hard going and it was several hours before we reached the easterly slopes of the Middle Sister. At noon we had arrived at the head of Collier Glacier in the saddle between the North and Middle Sisters. Here we made final preparations for the climb, ate lunch, cut our 175 foot rope into two pieces, and cached our haversacks, shirts and other accessories not needed for the ascent.

We made the first part of the climb up the south hogback a bit too hastily, as several members of the party became considerably fagged by the time we arrived at the lower end of the series of spires and pillars which surmount the ridge below Prouty Pinnacle.

At this point of the climb we were for a moment perplexed as to the route. The pillars appeared difficult, probably impossible, to negotiate over the top, and the bases of most of them began so far down both sides of the ridge as to make it a very ticklish job to encircle them. We finally concluded that to skirt the east side of the series of spires, which leads directly to the base of the main pinnacle, was the most likely route. The hour was growing late and as the party was considerably separated, each of us went around this point as we arrived. The footing was very insecure and will undoubtedly be impossible eventually. Each hand and foothold must be tested with great care as a slip would indeed be fatal. Only five of our party, Ervin McNeal,

Phil Philbrook, Armin Furrer, Fred Bauman and myself arrived at the base of the pinnacle. The other four members announced that they, for various reasons, "had enough."

The negotiation of the west base of Prouty Pinnacle is simple, although the footing is loose and liable to avalanche at most places. Having taken half of the rope with us we brought it into play to ascend to the top of the hanging snow-field at the base of the chute which leads to the summit. The snow-field was in good condition for climbing this year, the snow having melted away from the cliff at the top, leaving a safe passage. After crossing the ice-field, the rope was brought into use again. Each of us slid down to the loose rock some 80 feet below, kicking steps as best we could on the way down, that we might have some means of ascending on our return.

From the snow-field to the chimney the climbing is not difficult, although the danger from falling rocks is imminent at all times. One is indeed surprised at the easy climb afforded by the use of the chimney. It would seem as though Nature had fashioned it for the express purpose and convenience of climbers. No snow whatsoever was found on the floor of the chute this year, although the notch on the eastern side of the saddle was quite well covered with it. Upon reaching the 40-foot wall at the south end of the chute we again used the rope, not as a necessity, but in order to save time. The wall presents little difficulty, as the footing is fairly solid, but it is dangerous for a party to ascend, one over the other, because of the insecurity of some very large boulders near the top of the wall.

From the top we proceeded to the south prong of Prouty Pinnacle, and shouted to the four remaining members of the party, who were now on their way down the hogback to Collier Glacier. Upon this pinnacle we found an old rusty can (Weir's can), but the contents had become disintegrated, if indeed there had ever been any. The route to the summit of the north prong of the pinnacle was quite obvious and we arrived with no difficulty, on the topmost peak, at about five o'clock.

We quickly unearthed the Mazama box which we found to be in excellent condition, due to the fact that it had been wrapped in heavy oil-cloth. We spent about half an hour in inspecting the records and read with interest the short accounts of several former climbers. We found several articles of interest, left by members of the Mazama party in 1922, among which were a safety pin, a penny, a Canadian dime, a key, and several slips of paper, all of which were requested to be returned to their respective owners. This we did on a later date, as their owners will probably testify. We then entered our names in the Mazama

book, with a short account of our trip. Our party of five made a total of 26 whose names appear in the book.

As it was now five-thirty we thought it advisable to descend as rapidly as possible, that we might traverse Hayden and Diller Glaciers and the rough country between the mountains and Green Lake before dark. We descended to the base of the chute and from here inspected the route, which to us looked accessible up to Glisan Pinnacle. It is the opinion of our party that its ascent would have been possible without incurring great difficulties. The whole mountain, in fact, seemed to be this year in a fair condition for climbing.

Making our way a little to the northwest, negotiating some very treacherous outcroppings of loose rock in doing so, we descended a long, steep draw which led down to Collier Glacier, to a point perhaps half a mile or more below the head. (This was evidently the route taken by Wier in 1914.) Our descent was attended by the usual hazard of falling rock, but we arrived on the glacier without mishap, in less than half an hour. From here to the shoulder between the Middle and North Sisters proved to be quite a distance and the sun went down just as we arrived at the scene of our caches. We found to our dismay that the rest of the party had gone on down, taking with them our packs and shirts. This was indeed serious, since it was now almost seven-thirty and the air on the peak cools quickly.

At seven-forty-five, after vainly searching for our shirts, we started our descent down over Hayden Glacier, which we accomplished with little trouble, although the rapidly falling darkness made it necessary to choose very carefully our route among the crevasses. We reached the long low ridge, probably a huge lateral moraine, which divides Diller from Hayden Glacier, but from here found it impossible to cross the Diller ice-field due to the darkness. This left only one route of descent—down the lateral ridges to the base of the North Sister, then attempt to skirt around the base and pick up the trail again.

After about an hour of exhaustive work we reached the base of the peak, but on attempting to find our trail of the morning found that it would be unwise. It was now pitch dark, and a gale was blowing through the draw between the South and Middle Sisters, adding nothing to our comfort, scantily clad as we were. Giving up all hope of returning to Green and Sparks lakes that night, thus completing our climb in one day, we prepared a fire to the leeward of a small knoll and spent the night without food, water or proper clothing at the base of the Middle Sister. This was the only unpleasant feature of the whole climb.

Around *the* Year *with* Mazamas

By DOROTHY BROWNELL

The prospect of a two weeks' vacation entirely out of one's own world and in the enchanting land of high mountains has always drawn the interest of out-of-doors lovers to the Mazamas. Though the summer outing was the primary and almost exclusive interest in the early years of the club, fifteen or more years ago there grew up a custom among Mazamas of taking Sunday walks. These trips were not official and simply grew out of a mutual love of out-of-door life. Arrangements were made by telephone, and the trips suited the weather and the convenience of the members. Occasionally early Sunday breakfast at the end of a suburban carline would be followed by a country ramble for the enthusiast, or a return to the city for the church-goer. These early walks, however, seem to have been, for the most part, quiet tramps through the suburbs or surrounding country.

In 1912, under the inspiration and direction of Mr. W. P. Hardesty, the official "local walks" were begun. Interest in Mazama affairs had dropped to a low ebb, and there were only about seventy members left in good standing. On the first walk, April 7th, 1912, there were seven people—six men and a small boy. The next Sunday the attendance was fourteen, and on the third week, twenty-eight. Owing greatly to the tireless and enthusiastic efforts of Mr. Hardesty, interest and attendance steadily increased, so by the following winter it was not uncommon to have a hundred or more present on a walk. When Mr. Hardesty gave up the chairmanship of the committee several years later, the local walks had become an established part of Mazama life.

We may consider ourselves good and true Mazamas with dues paid, summer vacation spent climbing mountains, and when opportunity arises, our influence used to preserve natural beauties, yet, we may seldom patronize the local walks. But ften when the early summer air gets a tang in it that suggests camping out, we pull out our outing togs, fish out our big boots and packsack, then hunt a local walks schedule to see what trip is in line for the next Sunday. Since the local walks have not been in our habitual course of life we are somewhat doubtful about attending. We know, however, we are sure to return physically tired, with winter-stiffened muscles loosened up and with our mental world put to rights. It is remarkable how a day in the open will air one's troubles. And on a local walk we are sure to find friends—some old crony with whom we have panted up mountain peaks, or some new acquaintance who loves the forests as

we do. The local walks are jolly fun, though it is to our discredit that we seldom tell the leader or the committee. The local walks committee is one of the hardest-worked and the most-maligned committees in the club. Did you ever give the chairman a word of appreciation and see how astonished he is to receive praise, and how he glows under your approbation?

While we all consider the local walks as a convenient week-end diversion, there are other aspects often overlooked. The local walks offer one of our principal opportunities for meeting the public. Nearly every Sunday a small group of new members ventures out on a Mazama hike. They may discover in us a delightful opportunity for outdoor recreation and study, and the Mazamas may gain many new members thereby. Often a stranger's interest cools, however, after two or three trips, but in that short contact he has learned, consciously or unconsciously, something of the fundamental precepts of the open. And these need so vitally to be taught at this time—a clean camp, a dead fire, and unmolested flowers.

The Mazamas pride themselves on co-operating with the Forest Service, and most of the opportunities for work with the service come through the local walks. For two years we have had the pleasure of a trip to the Wind River Experiment Station, where Dr. J. V. Hoffman and his aids have added great interest to our visit with explanations of the work there. We have on several occasions, with our own hands, built trail under the direction of rangers. Wherever we have worked with this organization, Mazamas have always been more than repaid.

One of the objects of the Mazamas is the exploration of mountains. While the country adjacent to Portland has been fully explored, strictly speaking, for a good many years, we have often had trips to delightful corners unknown as yet to the public. It was not so many years ago that the Mazamas found Larch Mountain such a pleasant climb that they did much to bring it to public notice. This interest was found so worthy that a trail was finally constructed to the summit for the use of the public. Mazamas were among the first enthusiasts to herald the beauties of Table Mountain, and pioneer trips were made to Wahtum Lake. More recently we flatter ourselves that notice has been brought to Paradise Park on Mt. Hood, a lovely region first visited under local walks committe management.

So throughout the year, the local walks accomplish no small part of the exploring that is done by the Mazamas.

The President's Message

"Look at the end of work, contrast
The petty done, the undone vast
This present of ours with the hopeful past.

So sings the most corageous and the most inspiring of English poets, and so I think the bravest and most hopeful of us must feel as in sober retrospect we review the results of the labors which the revolving year has brought to a period. Yet we are justified in rehearsing at such a time the accomplishments of the year, if for nothing else, in order that we may justly appraise the results of them and make a true estimate of the tasks of the coming year when the "undone vast" should be the subject of our thoughts. And we may take some courage from the excellent maxim that he who does all he sets out to do, proves nothing save that he did not set out to do enough.

It can not be doubted that the most notable event of the fiscal year just closed is the achievement of the Outing Committee in carrying out the expedition to the beautiful and magnificent scenes of Paradise Park and Eden Park, regions hitherto virtually unknown, in the face of labors and difficulties fully equal to those of two ordinary outings. I shall not here encroach upon a field which will be occupied by a more detailed account of this outing, but it is fitting to say at this time that no more successful excursion was ever made by the club, that in the mass and in detail it was little short of perfect, and that it will certainly have results of the utmost value to the club, to the people of the entire State, and, it is hardly too much to say, to the world at large.

Hardly second in interest, and we hope not second in eventual importance, to the members of the club at least, is the building of the lodge, which, for many years only a shadowy hope, is now a reality. The reports of our Lodge Committee have informed you that the site has been selected by the committee, approved by the council, and granted to us under special permit by the Forestry Department. Plans have been prepared by our architect, Mr. Jamieson Parker, who has very generously donated his services, and the erection of a modest but comely and substantial building is now well under way. It stands on a crescent-shaped tract of land about an acre in extent, lying immediately south of the Government Camp Highway just above or east of the upper of the Twin Bridges. The Little Zig-Zag River flows along its whole front on the highway, and its southerly boundary is defined by a high bluff which abuts upon the river at either end and recedes between them to leave a level area which seems destined by nature for our very purposes. The ground is set with fine trees, and this, together

with the river in front, gives it an effect of seclusion, while in fact it is perfectly accessible from the highway. We take pleasure in the thought that the great fireplace, which the architect has conceived as the chief feature of the entire building, will become a focus and radiant center for the activities of the club, and that for many years to come the leaping flames kindled upon its spacious hearthstone will light up the "laughter and kind faces" of gatherings where the spirit of our club will find its freest and best expression. In the furnishing of the lodge, and in converting its bare walls, into a real home, both the generosity and taste of our members will have ample scope for their exercise.

The establishment of a monthly periodical is another important step which the year has to its credit. If we may judge from the experience of other and smiliar clubs, the paper will be more and more found to fill a necessary place in the life and work of the club, and will become an indispensable organ of information and opinion. Very serious difficulties of many sorts, but especially of a financial nature, beset the beginning of a periodical of this character.

In this connection it is impossible to forbear a suggestion that the budget of the club is greviously inadequate to the undertakings which increasing membership has imposed upon it, and which the decreasing value of money is making constantly more difficult. That the club finances are in the eminently sound condition disclosed by our treasurer's reports is due to a stringent economy in the exercise of which, needs essential to the best welfare of the club have often had to be reluctantly foregone, and further to the fact that good fortune has for a series of years waited upon the anxious care and wise foresight of the Outing Committee, and that is a condition which will inevitably sometime fail to recur. We believe it is within bounds to say that there is probably no club in the country which renders to its members services at all comparable with those which this club renders, at anything like the same cost to them, and it is certain that it cannot always continue to do thus much. After mature consideration, and fully recognizing the strong objections which exist against raising our long established rate of dues, I am forced to recommend that the dues for local members be raised to $4.00 per year, of which say 50 cents should be allotted to the monthly periodical and the residue employed in various ways which are required to make the club both more attractive and more efficient, e. g., in finding and furnishing quarters more conveniently located and better suited to our needs and uses. I earnestly invite the attention of the new council to this as the most pressing matter before them in the coming year.

I regret that the limitations of time and space do not permit a

detailed account of the great amount of work which has been done by various committees, among others the Outing, Local Walks, Publicity and House committees, whose work is worthy of the most cordial commendation. Mention must not be omitted however of the admirable work done by the Scouting Committee and by various leaders of local walks in preparing and carrying out their expeditions, often at a sacrifice of time and labor of which those who profit by it have not the least conception. The walks up Duncan and Archer creeks in Washington and down Ruckel Creek in Oregon, fairly deserve to be listed as discovery and exploration, so interesting and unknown was the scenery which they revealed. This kind of work, followed as it should be (and as in the case of Paradise Park it was) by the building of fine trails which make their features of unique beauty and wonder more generally accessible, is of itself enough fully to justify the existence of the club, and the time and effort its members devote to it. In general it must be said that the younger members of the club have performed many and laborious tasks without thought of any recognition or any reward save the joy of working. They have demonstrated that the future of the club will be in safe and strong hands—a source of great satisfaction to the elders who must look forward to handing over the active work to them at no distant date.

The membership rolls show a slight increase over the high mark of last year. The finances of the club, as already mentioned, are shown by the treasurer's report to be in excellent condition. No factional differences mar the fraternal spirit of the club. No reason is apparent why the coming year should not be the best in our history.

Respectfully submitted,

RICHARD W. MONTAGUE.

Photo by Foster

Sunset on Zig-Zag Glacier, Mt. Hood.

Book Reviews

"Nature In American Literature." This book presents a study of nine prominent American writers with particular reference to the love and knowledge of nature displayed in their work. Bryant, Whittier, Lowell, Whitman and Lanier are the poets; Emerson, Thoreau, John Muir and John Burroughs are the prose writers whose work is analyzed.

All loved gentle nature, and with the exception of Muir, Whittier and Burroughs, lost their intimacy with nature when two or three miles from home. Each recognized nature as medicinal, sobering and healing, imparting a sense of peace and uprightness.

"The sweet breeze
That makes the green leaves dance, shall waft a balm
To thy sick spirit."

"A woodland walk,
A quiet of river-grapes, a mocking thrush,
A wild rose, or rock-loving Columbine,
Solve my worst wounds."

Elizabeth Fitz.

Norman Foerster. *Nature in American Literature.* MacMillan Co. 1923.
(Supplied by the Bureau of Associated Mountaineeirng Clubs of North America.)

"Winthrop Ellsworth Stone." One of the late additions to the Mazama library is a volume dedicated to the memory of Dr. Winthrop Ellsworth Stone by the Board of Trustees of Purdue University. In its physical features it is most attractive and suitably preserves the many tributes paid to Dr. Stone by his friends and co-workers.

The addresses delivered at the memorial exercises held at Purdue University are given first place and include addresses given by the governor of Indiana, and by members of the Board of Trustees, the faculty and the student body of Purdue.

The section devoted to tributes from friends and colleagues give a history of Dr. Stone's life from boyhood up, and acquaints us with the wide range of his interests and activities.

Our personal acquaintance with Dr. Stone was as a mountaineer and so the section entitled, "From Comrades in the Mountains" will have a special appeal to Mazamas. His qualities as a "Mountaineer" are admirably portrayed by Allen H. Bent in an article reprinted from the *Boston Transcript.* "Nature Lover" is the title given the account of his connection with the Canadian Alpine Club by Albert H. McCarthy, while the memorial to him in our own *Mazama* by Richard W. Montague is given the appropriate title "Comrade."

Two selections from Dr. Stone's own writing were evidently chosen to represent his deepest interests, education and mountaineering. The bibliography compiled by the librarian of Purdue University gives a complete list of all his published writings.

Mazamas who knew Dr. Stone will wish to read the book because of their friendship for him, while those who were not so fortunate as to know him personally will appreciate the tributes to so honored a mountaineer.

E. P. R.

Purdue University. *Winthrop Ellsworth Stone.*

"BEAUTIFUL AMERICA." This attractively illustrated volume, with a picture of Mt. Hood on the cover, contains much interesting material about the beauty spots of the United States and Alaska. There are chapters on mountains, lakes, springs, rivers, deserts, national parks and monuments and other types of vacation places.

As the author says in the introduction, "America is so vast, and its scenery so varied and so beautiful in every aspect, that in one small volume only those places that are most noted or most unusual can even be mentioned, and of those merely sufficient information can be given to awaken a patriotic interest in and a desire to learn more of the wonderful natural beauty of this great land."

There is not enough minute detail given to make this volume serve as an accurate guide book and we wish too that the writer had not covered so much territory, as many places have to be visited much too hastily to give the stay-at-home an opportunity to get complete pictures of them. But the descriptions should serve as a stimulus to the reader to become better acquainted with the scenic places in America.

Many Indian legends and bits of appropriate verse are scattered through the text. An appendix gives a list of the authors whose verses have been quoted. A good index completes the book.

BEULAH M. CARL.

VERNON QUINN. *Beautiful America.* New York. Stokes. 1923. $4.00.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"OUR VANISHING FORESTS." This writer states an effective forest policy in six words, "Keep out fire and plant trees." This may well be adopted by all who wish to see our trees preserved from early destruction. Co-operation in the common cause of preservation and afforestation is the need of the day. Several States now require by law that the public schools teach forest fire prevention, while a number of cities and towns have established "town forests," and are beginning to solve their afforestation problem. He would have every "heedless smoker and greenhorn camper" taught the lesson of the elimination of the fire menace as one of the first lessons toward future tree growing.

Interesting chapters are found in this book dealing with the forest as a preserver of lakes, streams, wild life and human vigor; discussing the great variety of uses of wood, from shoe trees and clothespins to roofs and railroad ties; and suggesting the need for the consideration of the wood problem by Government and State authorities, as well as the need for an increase first of public enlightenment and then of general interest, which might naturally be expected to follow such enlightenment.

The author surprises us with information which those who live in a land of forests might naturally be expected to know. For example, it is hard for us to believe that in the East large shipments of sawdust are regularly received from Scandinavian countries, when every day we see huge piles of this by-product burning near our large mills.

Mr. Peck says he has written this book for Mr. and Mrs. Average Citizen and it surely is readable and informative. We of the West should be particularly interested in it and in the problems which it discusses for we hold, as it were, the balance of power in the world of wood.

LAURA H. PETERSON.

ARTHUR NEWTON PECK. *Our Vanishing Forests.* MacMillan Co. 1923.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"WILD ANIMAL HOMESTEADS." This book, the last written by this untiring nature guide, deals with the more intimate everyday happenings in the lives of wild animals such as the grizzly, wild cat, antelope, deer, coyote, beaver, bighorn sheep, porcupine, skunk and squirrel.

The author takes us with him to the very haunts or homesteads of these animals, near which he has lived for weeks and months at a time. Certain animals have maintained a sort of squatter's right to a particular area of land, one grizzly having a domain of about one hundred and fifty square miles. No other grizzly was welcome but many other wild animals not offensive to this king were ignored and allowed to roam at will.

An entire chapter is given to the sense of smell or a nose for news and throughout the book many references are made to the keenenss of this sense.

The leisure side of animal life has its charm. The beaver, for instance, takes a three months' vacation in order to give his home an airing and renovating and travels many miles away, resting and picnicing, and so keeps himself alive and fit. He is a master of the fine art of living. There is but little hurry, worry and work in the wilderness. Wild animals normally lead lives largely of recreation, play and leisure time rightfully used. Not bad hints for this modern mad rush we are all in. So, for more than one reason the book has much of value for us all.

In an appreciation, proposing that an Enos Mills Day be established in the schools to commemorate the life and work of this great naturalist, Judge Ben Lindsey said, "His stories of all the live things in our mountains should then be read * * May not this be Colorado's monument to our Burroughs, our Muir, our Thoreau—our most useful citizen." MARY E. POWELL.

ENOS A. MILLS. *Wild Animal Homesteads*. Doubleday, Page & Co. 1923.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"WESTERN BIRDS." For anyone interested in birds this book will give most valuable information, and for one who knows little about our feathered friends it will do much to create interest. The author is scientifically correct but her aim has been to put the subject matter into plain and every-day language, that the general public will be interested.

There are twenty-five families of the more common Western birds recorded and each family is subdivided. Then the individual bird is described, giving its marked characteristics, and the songs and calls of many of the birds are likened to words that they seem most to resemble. The author has undoubtedly made a very intensive individual study of the birds themselves as well as an unlimited amount of research work. For those of us who have had the pleasure of watching the little Water Ousel the author's words will have an added interest. She says, "In the bird's way of poking about in crannies, rocks and dark places it has been likened to a wren. And, too, its loud clear vivacious song somewhat resembles that family. The song is exquisite and quite in harmony with the melody of the stream."

This is just a hint at the interest which runs all through the book and gives us a determination to know personally, more about these beautiful feathered folk.

The book is too large for a pocket guide, but it is excellent for the home library and very useful after an outdoor study trip.

MARY E. POWELL.

HARRIE WILLIAMS MYERS. *Western Birds*. The MacMillan Co. 1922.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"THE COLUMBIA HIGHWAY THROUGH THE GORGE OF THE CASCADES FROM PORTLAND TO THE DALLES."

This Columbia Highway booklet portrays in an enjoyable, readable manner the attractions of the most wonderful of all river and canyon highways. Early historical events, giving glimpses of Indian life in the Columbia Basin, geologic interpretations, climatic and other interesting features are here included.

The following extracts from the synopsis form a very fair key to the book: "Portland, only city with an extinct volcano inside its limits"—"Scientific discoveries since grading the Highway"—"What caused Wind and Shell Rock Mountains?"—"What is the truth of the legend of 'The Bridge of the Gods'?"—"Famous first battleground of Gen. Phil. H. Sheridan"—"Scene of historic Indian massacre"—"Who moved St. Peter's Dome?"—"Celebrities connected with Gorge history, beginning with Lewis and Clark."

It is enhanced by over one hundred illustrations, the fascinating photographs showing a chaotic wealth of unsurpassed beauty and grandeur.

In the foreword, we are reminded that the compiler, M. C. George, ex-president of the Mazamas, is a lover of nature and a student of geology. He resides at Portland but has a fruit ranch at The Dalles, requiring frequent visits. He has made hundreds of trips along the scenes described.

The compiler gives special credit to Ira A. Williams, State geologist, for his kindness in consultation and aid in compilation of Columbia Gorge geology.

All in all, the book under review is a comprehensive compilation of information, useful to the traveler on a journey through the gorge.

HARRIETT E. MONROE.

M. C. GEORGE'S BOOK. *The Columbia Highway Through the Gorge of the Cascades from Portland to The Dalles.* Printed by James, Kerns & Abbott Co. Engravings by West Coast Engraving Co.

"SNOW AND ICE SPORTS."

Another book for the winter sportsman! This time Elon Jessup has given us a winter manual on snow and ice sports which promises to interest as many readers as did his "Motor Camping Book" or his "Intimate Golf Talks." In it he not only describes and elucidates in a manner both practical and interesting the proper modes of dress and equipment for all kinds of winter sports, but adds specific chapters on ski-ing and ski-jumping, wheeling on snowshoes and using ice creepers, manipulating a toboggan and camping in the snow. Then for the devotee of the kodak, he presents usable information on snow photography; and not unmindful of other classes of sportsmen, adds a chapter on ice fishing, ice boat sailing and scootering. Many pages deal with skating and include advice as to proper skates and skating shoes and gives the "Hows and Whys of Ice Hockey."

The history of ski-ing and tobogganning from the earliest days to the present is included, while the chapter on "winter mountaineering" is so fascinating that one gets from it an anticipatory thrill of the real thing. Rarely does one find a book which treats so comprehensively such a number of different though kindred sports, and which appeals alike to the novice and the initiated, to the old and to the young.

LAURA H. PETERSON.

ELON JESSUP. *Snow and Ice Sports.* E. P. Dutton & Co. 1923.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"CLIMBS ON ALPINE PEAKS."

"Climbs on Alpine Peaks," by Abate Achille Ratti, is one of the new books added to the Mazama library during the past few months. It is published by Houghton, Mifflin Co., and translated by J. E. C. Eaton. The author, now Pope Pius XI, not only stands pre-eminent in the religious world but holds an enviable place in the annals of mountaineering. It is a significant fact that the year of his birth, 1857, should also be the year when that famous mountain club, The Alpine Club, came into being. He alone among foreign ministers refused to leave the city of Warsaw at the time it was being threatened by the Bolshevist faction, and he it was who sent a message of encouragement to the recent Mt. Everest explorers who were willing to risk their lives to give the world the message of that great peak. Thus is shown his diversified interests.

It was after he was announced as Pope in 1922 that this collection of his various writings on Alpine experiences was made and given to the public. His descriptions of his expeditions show his love of the high places, as he pictures in turn the ascent of Monte Rosa, the traverse of Dufour Peak and Colle Zumstein, together with the ascent of the Matterhorn and Mont Blanc. In one of these accounts he says that, "there are no such things as sage and dangerous mountains, but every mountain has its good and bad moments" and furthermore "that mountaineering is not a breakneck pursuit, but that it is, on the contrary, merely a question of prudence and of a little courage, of love of nature and her most secret beauties."

In answer to the question as to why men go up on to the heights, he says it is not merely fascination, nor is it a desire to boast of his prowess, but it is a longing to know his land to its highest summits, a feeling of spiritual energy to overcome the terrors of lifeless matter—a desire to measure his faculties with the brute force of the elements. Excellent judgment and real respect for the forces of nature are classed by him as prime necessities of him who would climb and return. Whether it be in the struggle to reach the ever-receding summit, to scale the perpendicular rock walls, or to negotiate the dangerous icy track and the treacherous soft snow-field, certain external and internal or subjective conditions are indispensable. Were his advice followed in these respects fewer would be the fatalities or accidents so oft recorded on the part of those who scorn the deliberate carefulness of the real mountaineer.

In addition to excellent advice as to times and methods of climbing, as well as care in preparation for it, this book gives a most helpful suggestion for treatment of severe frost bite. In fact, one might conclude that this work is valuable for the information which may be used by those who have not had as much experience in mountain climbing as the author, as well as for the detailed account of his ascents of the Alpine peaks therein reviewed.

LAURA H. PEFERSON.

ABATE ACHILLE RATTI. *Climbs on Alpine Peaks.* Houghton, Mifflin Co. 1923.
(Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

"In the Heart of the Canadian Rockies." To write this interesting book Sir James Outram has drawn on his varied personal experiences, those of his contemporaries, and on stories of the past which he has been at some pains to ferret out and sift for merit.

The book is pleasing, being attractively bound and printed. Its four hundred and fifty pages are enriched by forty-six illustrations, many of which are exceptionally beautiful. The three maps provided form a most valuable addition to a work of this kind.

The author discusses the character of the Canadian Rockies, compares them with the mountains of other countries and gives something of the history of their early exploration and conquest. Along with descriptions of the country, its mountains and waters, are vivid accounts of thrilling trips and "first ascents" made by Outram and others. Banff, Lake Louise, Mt. Assiniboine, Mt. Lefroy, Mt. Forbes, Mt. Bryce, Mt. Stephen, the Ottertail Group, the Valley of Ten Peaks, Yoho Valley, and the regions farther north are covered. In the appendices are found a chapter on the Selkirks, some hints on outfit, and a record of "first ascents," giving altitudes of the peaks, dates of the climbs, and the names of climbers and guides. Sir James Outram himself has to his credit nineteen "first ascents," twelve of which were made with no companions except guides.

The writer tells his stories in an easy style, as one might recount around the camp-fire the experiences of his day. He gives the reader a pleasing sense of comradeship with the renowned mountaineers of his time—Whymper, Collie, Fay, Scattergood, Wilcox, and others—quite as if he had, indeed, tramped his long day and munched his hardtack-and-brown-sugar sandwich in the high places with one of these, and inspires him anew to pass on the outofdoors to those who know it not.

Margaret A. Griffin.

Sir James Outram. *In the Heart of the Canadian Rockies.* 1923. Macmillan. $3.50. (Supplied by the Bureau of Associated Mountaineering Clubs of North America.)

Report *of* Local Walks Committee *for* Year October 1, 1922, *to* September 23, 1923

Dates of Trip 1922	*Trip*	*Leader*	*No. Present*
Oct. 7	Hamilton Mountain	Ethel Loucks	35
Oct. 15	St. Johns-Beaverton	J. I. Teasdale	66
Oct. 22	Oneonta Gorge	J. Bush, P. G. Payton	77
Oct. 29	Gladstone-Barton	A. B. Williams	31
Nov. 4-5	Aschoff's	Local Walks Committee	187
Nov. 12	MacLeay Park-Mountain View	Mary Gene Smith, Velmaleta Woolery	14
Nov. 19	Gresham-Sandy River	Rex Bunnage	20
Nov. 26	Mt. Scott	Martha Gasch	29
Dec. 3	Eagle Creek-Estacada	Buel Nelson	13
Dec. 10	Barton-Logan-Paeth Farm	Cecil Pendleton	42
Dec. 17	Mistletoe	John A. Lee	52

Dec.30-Jan.2, 1923	Seaside, Oregon	Angora Club	
Jan. 7	Metzger-Portland	Mr. and Mrs. J. Homer Clark	12
Jan. 14	Lake Grove-Oregon City	Ralph Osvold, Robert Crawford	72
Jan. 21	Castle-Eagle Point	Nina Scales	65
Jan. 28	Angel's Rest-Wahkeena Falls	Mr. and Mrs. C. E. Blakney	93
Feb. 4	Mystery Trip	Mr. and Mrs. R. H. Bunnage.	53
Feb. 11	Oregon City-Coalca Pillar	Kenneth Murfree	59
Feb. 18	MacLeay Park-Mt. Calvary	Mr. and Mrs. W. W. Evans.	48
Feb. 25	Skyline Ridge-Kings Heights	May and Ethel Benedict	91
Mar. 3-4	Larch Mountain-Snowshoe	P. G. Payton	110
Mar. 11	Archer Creek Falls	A. H. Marshall	51
Mar. 18	Council Crest	S. M. Fries	87
Mar. 25	Rocky Butte	Martha Landis and Sue Kellett	116
April 8	Duncan Creek	A. H. Marshall	71
April 15	Cedar Mills	Maudileen Wilson	65
April 22	Trail Day	Trails Committee	
April 28-29	Aschoff's	Joe Bonneau	100
May 6	Munrae Point-Tanner Creek	Everett Philpot	80
May 13	Geology Field Class		52
May 19-20	Bull Run-Eagle Creek	Kenneth Murfree	32
May 26-27	Silver Star	Gertrude Williams and E. McKittrick	40
June 3	Geology Field Class		30
June 9-10	Tigard-Sunny Slope Farm	Mr. and Mrs. C. E. Blakney	55
June 16-17	Wind River Experiment Station	M. W. Manly	45
June 23-24	Hart's Gravel Mtn.-Washougal	Jack Roberts	59
July 1	Extra		19
July 7-8	Eagle Creek-Ruckel Creek	John Scott and Geo. Barker	21
July 22	Cottrell-Sandy River	Ruby and Leona Henry	73
Aug. 12	Tualatin-Oswego Lake	Mr. and Mrs. E. T. Valliant	20
Aug. 25-26	Alspaugh-Eagle Creek	Dorothy Osborne	26
Sept. 1-2-3	Wahtum Lake-Indian Mountain	Merle Moore and E. T. Valliant	38
Sept. 8-9	Swift-Oregon City	Emil Leitz	24
Sept. 15-16	Bald Mountain	Roy W. Ayer	13
Sept. 22-23	Benson Plateau	R. H. Bunnage and Eric LaMade	36

Respectfully submitted,

W. P. FORMAN,
Chairman Local Walks Committee.

Report *of the* Certified Public Accountant *who* Examined *the* Financial Affairs *of the* Mazamas

PROFIT & LOSS ACCOUNT

For the Period from October 10, 1922, to October 8, 1923

INCOME:			
Members' Dues			$2,025.00
Miscellaneous:			
Interest on Liberty Bonds	$ 27.57		
Interest on Savings Deposits	109.23		
Key Sales	10.75		
Sale of Old Magazines	18.95		166.50
			$2,191.50
Profit from Committee Transactions:			
PROFITS:			
Annual Outing—Mt. Hood	707.70		
Local Walks	168.08		
Oregon Out-of-Doors Magazine	262.30		
	$1,138.08		
LOSSES:			
Mazama Magazine Annual	861.10		
Monthly Magazine	224.15		
Entertainment	17.33	1,102.58	35.50
Gross Income			$2,227.00
EXPENSES:			
Club Room Rent	$ 610.00		
Telephone Service	99.10		
Printing and Stationery—General	317.42		
Associated Club Dues	15.00		
Insurance	38.35		
Furniture Repairing	94.25		
Keys	12.00		
Sundry	83.13		1,269.25
Net Income			$ 957.75

BALANCE SHEET

As at October 8, 1923

Assets

Cash in Banks:		
General Funds	$1,662.68	
Savings Fund	4,216.20	$5,878.88
United States Liberty Bonds		700.00
Lodge Building at Twin Bridges—Oregon National Forest		3,000.00
Club Room Furniture, Library and Camp Equipment		1,000.00
		$10,578.88

Liabilities

Contractors for Lodge Building	$2,000.00
Surplus	8,578.88
	$10,578.88

CERTIFICATE OF AUDITOR

Portland, Oregon, October 29, 1923.

THE MAZAMA COUNCIL,
Portland, Oregon.

In accordance with your instructions I have audited the accounts of the Mazamas, Portland, Oregon, for the fiscal year ended October 8, 1923, and now submit my report thereon.

After meeting all current expenses the operations of the Mazamas for the period under review resulted in a net income of $957.75. Particulars are given in the accompanying Profit & Loss Account. The Balance Sheet on this page presents the financial condition of the Club as at October 8, 1923.

The new lodge building was incomplete at October 8, 1923, but sufficient work had been performed to cover the payment of $1,000.00, which was made. It is expected that the lodge will be completed within the month.

Certificates were received direct from the banks in verification of the cash funds. The United States Liberty Bonds were inspected. The clubroom furniture, library and camp equipment is insured against fire in the amount of $1,500.00.

The accounts of the Treasurer and the various committees were checked and found to be in order.

Yours truly,

ROBERT F. RISELING,
Certified Public Accountant.

Mazama Organization *for the* Year 1923-24

President.....RICHARD W. MONTAGUE
Vice-President.....ALFRED F. PARKER
Corresponding Secretary.....JAMIESON PARKER
Recording Secretary.....ROBERT W. OSBORN
Financial Secretary.....MARGARET A. GRIFFIN
Treasurer.....W. P. FORMAN
Historian.....DOROTHY S. BROWNELL
Chairman of Outing Committee.....MARTHA E. NILSSON
Chairman of Local Walks Committee.....FRANK M. REDMAN

COMMITTEES

Outing Committee—Martha E. Nilsson, Chairman, Chas. J. Merten, John A. Lee.

Local Walks Committee—Frank M. Redman, Chairman, J. O. Bonneau, M. W. Manly, Ethel Coover, Nelle Heizer, Elizabeth McKittrick.

Entertainment Committee—Lindsley W. Ross, Chairman, Charles G. Wilson, Helen S. Hartley, Velmaleta Woolery, Clarence Hogan.

Educational Committee—Harriett E. Monroe, Chairman, George N. Barker, N. LeRoy Cary, B. A. Thaxter, Tillie Auer.

Library Committee—Dorothy S. Brownell, Chairman, Beulah Miller Carl, Vice-Chairman, Lucile Cogswell, Ruby Henry, Susanna Kellett Brockway.

Membership Promotion Committee—E. T. Valliant, Chairman, S. M. Fries, Mildred Halverson.

Membership Committee—Alfred F. Parker, Chairman, Margaret A. Griffin, Frank M. Redman.

Monthly Publication Committee—Dorothy S. Brownell, Harold S. Babb, W. P. Forman, Ruby Cruikshank, Ella P. Roberts.

Publication Committee—Robert W. Osborn, Chairman, M. W. Gorman, Merle W. Manly, Geo. E. Matthews, S. M. Fries, Ella P. Roberts.

Auditing Committee—Robert F. Riseling, Chairman, Roy W. Ayer, T. M. Rogers.

Lodge Committee—John A. Lee, Chairman, R. L. Glisan, L. A. Nelson.

Trails Committee—Merle S. Moore, Chairman, R. H. Bunnage, Earl A. Marshall.

Scouting Committee—John D. Scott, Chairman, Lee W. Foster, A. H. Marshall, F. W. Stadter, Jennie Hunter.

Publicity Committee—Margaret A. Griffin, Chairman, Fred H. McNeil, Neni Imhaus.

Photographic Committee—F. I. Jones, Chairman, Everett Philpoe, E. F. Peterson.

House Committee—John A. Lee, Chairman, Rodney L. Glisan, L. A. Nelson, Bernice J. Gardner, Martha Landis.

Membership

Address is Portland, Oregon, unless otherwise designated

ACHESON, THOMAS J., 800-1 Securities Bldg., Seattle, Wash.
ACTON, HARRY W., 839 Riverside Drive, New York, N. Y.
ACTON, MRS. HARRY W., 839 Riverside Drive, New York, N. Y.
ADAMS, W. CLAUDE, 1208 Selling Bldg.
AGEE, LEONARD, 696 Sherrett Ave.
AINSWORTH, KATHERINE, Hawthorne Terrace.
AITCHISON, CLYDE B., care Interstate Commerce Com., Washington,D.C.
AKIN, OTIS F., 919 Corbett Bldg.
ALEXANDER, HELEN, Chesterbury Hotel.
ALLISON, J. E., University of Oregon, Eugene, Ore.
ALLPHIN, WILLARD, 1115 Mass. Ave., Cambridge 39, Mass.
ALMY, LOUISE, Dillon, Mont.
ALLSTADT, HERBERT, 324 19th St.
AMACHER, JOHN, 210 13th St.
AMMANN, CHARLES, 1234 E. Oak St.
AMOS, DR. WM. F., 1016 Selling Bldg.
ANDERSON, LEROY E., 144 South Ave. 53, Los Angeles, Cal.
ANDERSON, WM. H., 4464 Fremont Ave., Seattle, Wash.
ANDREWS, ZOEVELAIR, 394 E. 37th St. N.
ANSLEY, J. W., 1115 Senate St.
APPLEGATE, ELMER I., Box 236, Klamath Falls, Ore.
ARNSPIGER, MRS. STELLA U., 6401 89th St. S. E.
ARRINGTON, MRS. W. M., Multnomah Hazelwood, Bridal Veil, Ore.
ASCHOFF, ADOLPH, Marmot, Ore.
ATKINSON, R. H., 837 Pacific Bldg., San Francisco, Cal.
AUER, TILLIE H., Y. W. C. A.
AYER, LEROY, JR., Box 20, Route 2, Milwaukie, Ore.
AYER, ROY W., 409 11th St.

BABB, HAROLD S., 1462 E. 18th St.
BACKUS, LOUISE, 753 E. Main St.
BAILEY, A. A., JR., 644 E. Ash St.
BAILEY, L. D., care U. S. Ranger Station, Cascadia, Ore.
BAILEY, VERNON, 1834 Kalorama Ave., Washington, D. C.
BALLOU, O. B., 10th St. at Flanders.
BALMANNO, JACK H., Multnomah, Ore.
BANFIELD, ALICE, 570 E. Ash St.
BARBEE, C. M., 909 Stevens Bldg.
BARCK, CARL, 205-7 Humboldt Bldg., St. Louis, Mo.
BARKER, GEORGE N., 990 Council Crest Drive.
BARNUM, W. H., 1915 W. 1st St., Los Angeles, Cal.
BARRINGER, ALICE, 145 E. 43rd St. N.
BEATTIE, BYRON J., 830 Rodney Ave.
BECK, J. G., Prescott, Ore.
BECKLEY, ALMA T., 480 N. E. 51st St.
BENEDICT, ETHEL, 185 E. 87th St. N.
BENEDICT, LEE, 185 E. 87th St. N.
BENEDICT, MAE, 185 E. 87th St. N.
BENEFIEL, FRANCIS W., 315 N. Boyle Ave., St. Louis, Mo.
BIDDLE, HENRY J., Route 1, Vancouver, Wash.
BIDWELL, EDMUND, 701 Corbett Bldg.
BILLMEYER, MARY P., 642 Court Hse.
BJORKLUND, ERIC, 1755 Woolsey St.
BJORKLUND, MRS. ERIC, 1755 Woolsey St.
BLACKWOOD, E. C., 387 Webster St.
BLAKNEY, C. E., Route 1, Sherwood, Ore.
BLUE, WALTER, 1310 E. 32nd St. N.
BLUME, LENA, 385 11th St.
BONES, THOMAS J., 7629 55th Ave. S. E.
BONNEAU, J. O., 869 Garfield Ave.
BORNT, LULU A., 1302 N. Hobart St., Los Angeles, Cal.
BOWERS, MARION R., St. Francis Apts., 21st and Hoyt Streets.
BOWERS, NATHAN A., 883 Mission St., San Francisco, Cal.
BOYCE, EDWARD, 207 St. Clair St.
BOYCHUCK, WALTER, 166 Nebraska St.
BRAGG, JESSIE, 287 Stark St.
BRANDBERG, EVA M., 6022 Woodstock Ave.
BREWSTER, WM. L., 1022 Gasco Bldg.
BROCKWAY, MRS. P. E., 928 Schuyler St.
BRONAUGH, JERRY ENGLAND, Gasco Bldg.
BROWN, ALBERT STANHOPE, 383 Madison Ave., care A. A. C. of W., New York, N. Y.
BROWN, EYLER, 1390 Emerald St., Eugene, Ore.
BROWN, G. T., 500 E. Morrison St.
BROWNELL, DOROTHY S., 1505 E. Taylor St.
BUCK, C. J., 549 E. 39th St. N.
BUCKMAN, WILLIAMSON, 102 N. Clinton Ave., Trenton, N. J.

BUGGE, ELWYN, 535 Geary St., San Francisco, Cal.
BULLIVANT, ANNA, 269 13th St.
BUNNAGE, R. H., 1548 E. 29th St. S.
BUNNAGE, MRS. R. H., 1548 E. 29th St. S.
BURCE, JESSIE M., 181 Rutland Ave.
BURGLUND, E. E., 1033 E. Alder St.
BURNHAM, ANNA E. D., 415 10th St.
BUSE, WALTER F., 52 Holgate Moorage.
BUSH, J. C., 2537 Prescott St., Parkrose Station.
BUTTE, HENRY G., 1035 E. 13th St. N.
BYERS, JOHN R., care Western Lumber Co., Oakridge, Ore.
BYRD, NELLIE, 266 E. 6th St. N.

CALLWELL, CHARLOTTE, 309 San Rafael St.
CAMPBELL, AGNES, Monmouth, Ore.
CAMPBELL, CELESTA, 252 N. Pearl St., Eugene, Ore.
CAMPBELL, GRACE, 117 E. 55th St.
CAMPBELL, ROBERT, 390 Belmont St.
CARL, MRS. BEULAH MILLER 1172 Minnesota Ave.
CARLOS, CLYDE E., Box 216, Hood River, Ore.
CARY, N. LEROY, 1368 E. Harrison St.
CASEBEER, MRS. R. W., 1634 W. 4th St., Bend, Ore.
CHASE, ETHYL P., Apt. 203, 425 W. Park St.
CHASE, RALPH A., 1405 Milan Ave., South Pasadena, Cal.
CHENEY, W. C., Box 551, Tillamook, Ore.
CHENOWETH, MAY, 104 N. E. 24th St.
CHORD, JACK, 155 E. 15th St.
CHORD, MARIE H., 155 E. 15th St.
CHRISTIANSON, WM. D., 147 Dundas St., London, Ont.
CHURCHILL, ARTHUR M., 812 Northwestern Bank Bldg.
CLARK, CAROLYN S., 347 Wheeler St.
CLARK, J. HOMER, 92 Front St.
CLARK, MARGARET JANE, Oregon City, Ore.
CLARKE, AURIL KEELER, Route A, Box 106, Eugene, Ore.
CLARKE, WARREN G., Route A, Box 106, Eugene, Ore.
CLODFELTER, VIVIAN, 1221 E. Madison St.
COGSWELL, LUCILE, 1103 37th St. S. E.
COLBURN, MRS. AVIS E., Box 33, Clovis, New Mexico.
COLE, MRS. H. W., 18, Oregon Yacht Club, River Route.
COLLIER, ADELL R., 24 E. 76th St. N.
COLLIER, CAROL, 24 E. 76th St. N.
COLLIER, FRANCES C., 24 E. 76th St. N.
COLLIER, RUTH, 24 E. 76th St. N.
COLLINS, W. G., 510 32nd Ave. S., Seattle, Wash.
COLPITTS, MARGUERITE, Box 2990, Honolulu, T. H.
COMPTON, RUTH B., Reed College Library.
CONCANNON, EFFIE, 1303 E. 14th St., Des Moines, Iowa.
CONRAD, A. J., 670 E. 17th St. N.
CONWAY, HARRY, 1727 E. Yamhill St.
CONWAY, T. RAYMOND, 608 Schuyler St.
COOK, DOROTHY E., Public Library, East Cleveland, Ohio.
COOK, VERA E., 1798 Woolsey St.
COOKE, MAUDE W., 1307 7th St., Oregon City, Ore.
COOPER, M. A., 664 E. Pine St.
COOVER, ENITH, 3910 66th St. S. E.
COOVER, ETHEL, 3910 66th St. S. E.
CORNING, H. I., 367 Vancouver Ave.
CORNING, MRS. H. I., 367 Vancouver Ave.
COURSEN, EDGAR E., 658 Lovejoy St.
*COVILLE, F. V., Dept. of Agriculture, Washington, D. C.
COWAN, EARL, Apt. 303 San Marco Apts., 464 E. Couch St.
COWPERTHWAITE, JULIA, 580 1st St.
CROCKETT, H. D., Box 2164, Sta. A.
CROUT, NELLE C., 1326 E. Tillamook St.
CRUICKSHANK, RUBY, 452 E. 14th St. N.
CUNNINGHAM, ROBERT B., 545 E. Broadway.
*CURTIS, EDWARD S., 614 2nd St., Seattle, Wash.
CUSHING, MILDRED, Counselor Apts., 263 Montgomery St.
CUSHMAN, CLYDE H., 1064 E. 15th St. N.

DAVIDSON, EARL N., Box 2057.
DAVIDSON, R. J., 701 E. 60th St. N.
DAVIDSON, WALTER O. B., Parkdale, Ore.
DAY, BESSIE, 212 6th Ave. W., Eugene, Ore.
DE CARIE, ANNA E. M., 786 Kerby St.
DENAND, P. J., 1101 Pine St., San Francisco, Cal.
DENNIS, ELSIE F., 1702 Dwight St.
DESIATA, P., 838 Gantenbein Ave.
DEUTE, W. L., 1249 Rodney Ave.
DEUTSCH, GERTRUDE E., 404 Fargo St.
DICK, STEWART, care Allen & Lewis.
*DILLER, JOS. S., U. S. Geological Survey, Washington, D. C.

Dillinger, Mrs. C. E., 1193 Taggart St.
Dimitry, Theodore, 314 Macleay Bldg.
Doeltz, Bertha M., 616 E. 11th St. N.
Dodge, Estella, 1237 E. 26th St. N.
Donohoe, Mary D., 521 Montgomery St.
Dowling, Colista M., 742 Belmont St.
Dowling, Eugene H., 742 Belmont St.
Drew, Nettie, 537 E. 36th St.
Dyer, R. L., 232 23rd Ave. N., Seattle, Wash.

Edwards, Alice L., Dept. Home Economics, R. I. State College, Kingston, R. I.
Eliot, Calista P., 20 E. Mt. Vernon Place, Baltimore, Md.
Eliot, W. A., 1011 Thurman St.
Ellis, H. C., Bend, Ore.
Emmrich, Arthur J., 531 E. 61st St. N.
Erren, H. W., 285 Ross St.
Esten, Sidney R., 301 W. 9th St., Anderson, Ind.
Estes, Margaret P., 692 E. 43rd St. N.
Evans, W. W., 844 Montgomery Dr.
Evans, Mrs. W. W., 844 Montgomery Drive.
Evanson, Arthur H., care Meier & Frank.
Everson, Fred L., 105 Utah St., Santa Monica, Cal.
Evon, Bernidette, Gladstone, Ore.
Evon, Genevieve, 911 Prospect Ave., Klamath Falls, Ore.
Ewalt, Everett, Y. M. C. A.

Fagstad, Thor, Multnomah State Bank.
Fallman, Nina A., Congress Hotel.
Farr, Amy V., 321 Custom House.
Farrell, Thos. G., 328 E. 25th St.
Farrelly, Jane, 1072 E. 29th St. N.
Filloon, Ray M., U. S. Forest Serv.
Finley, Wm. L., Jennings Lodge, Ore.
Finley, Mrs. Wm. L., Jennings Lodge, Ore.
Fish, Elma L., 394 N. E. 48th St.
Fitz, Elizabeth, Madison Park Apts.
Fleming, Margaret A., Box 479.
Flint, Richard F., 5636 Kenwood Ave., Chicago, Ill.
Ford, G. L., 109 Northwestern Bank Bldg.
Fordyce, C. P., 1701 Stone St., Falls City, Neb.
Forman, W. P., 332 Chamber of Commerce Bldg.
Forsyth, James R., 1187 E. 27th St. N.
Foster, Dorothy E., 694 Irving St.
Foster, Forrest L., 354 E. 49th St. S. E.
Foster, Helen T., 640 Clinton St.
Foster, Lee W., 570 Ladd Ave.
Foster, W. C., 224 Glenn Ave.
Fowler, Marcella A., 91½ Grand Ave.
Fragmeier, Freda, 335 19th St.
Franklin, F. G., Willamette University, Salem, Ore.
Franing, Eleanor, 1119 N. Broad St., Galesburg, Ill.
Frazer, Kenneth F., 1501 Yeon Bldg.
Freed, H. A., 697 Marshall St.
French, Irene, 195 Grand Ave. N.
French, S. H. J., Campbell Hotel.
Fries, Samuel M., 691 Flanders St.
Fritsch, Louis, 778 Market St., Chehalis, Wash.
Fuller, Frank, Route 1, Sulphur Springs, Alberta, Canada.
Fuller, Howard A., 717 Spring St., Seattle, Wash.
Fuller, Margaret E., 1640 Stephens St.

Gardner, Bernice J., 320 11th St.
Gardner, Harry W., 604 E. 67th St. N.
Gardner, Mrs. Harry W., 604 E. 67th St. N.
Gasch, Martha, M., 9 E. 15th St. N.
Gentner, Albert W., 645 Pittock Block.
Gerfin, Thelma, 346 E. 9th St. N.
Giesecke, F., 289 Yamhill St.
Gilbert, Clarence H., 830 Clackamas St.
Gilbert, Harold S., 423 Washington St.
Gilbertson, Martha, 898 E. Couch St.
Gilbertson, Naomi, 898 E. Couch St.
Gile, Eleanor, 622 Kearney St.
Gilmour, W. A., P. O. drawer 731.
Gjelsness, Rudolph H., 1730 La Loma Ave., Berkeley, Cal.
Gleyre, Mrs. Elsie M., 1639 E. 9th St.
Glisan, Rodney L., 612 Spalding Bldg.
Goddard, A. V., 503 E. Ankeny St.
Goldapp, Martha O., 454 Mason St.
**Gorman, M. W., Forestry Bldg.
Graf, S. H., 306 S. 8th St., Corvallis, Ore.
Grandy, H. H., 281 12th St.
Graves, C. E., Hood River, Ore.

*GREELEY, A. W., General Delivery, Center Conway, N. H.
GREEN, JESSE W., Milwaukie, Ore.
GRELLE, ELSA, 895 Northrup St.
GRENFELL, MRS. ROOT, 332 Chamber of Commerce Bldg.
GRIESEL, MRS. W. F., Box 386, Seaside, Ore.
GRIFFIN, LOTTA G., Box 665, Watertown, S. D.
GRIFFIN, MARGARET A., 814 Spalding Bldg.
GRIFFITH, B. W., 417 Boyd St., Los Angeles, Cal.
GRILL, ANNA, 5479 Harper Ave., Chicago, Ill.
GUNNER, EDITH M., 514 Vista Ave.
GUNSTER, MRS. KARL, Abstract dept., Court House.

HABBE, JOHN F., 704 Fletcher Trust Bldg., Indianapolis, Ind.
HAFFENDEN, A. H. S., Portland Van & Storage Co., 15th and Kearney Sts.
HAGLUND, J. L., 1132 Ferry St., Albany, Ore.
HAIR, MOZELLE, University of Oregon, Eugene, Ore.
HALL, HARRY B., 2185 Thompson St.
HALVORSEN, MILDRED, 303 Fitzpatrick Bldg.
HANCOCK, A. W., 92 E. 69th St. N.
HANSEN, RUTH E., 577 Kerby St.
HARDESTY, WM. P., Bend, Ore.
HARLAN, EDWARD G., University Club, Tacoma, Wash.
HARPER, IRA H., 2801 H St., Vancouver, Wash.
HARPER, LILIAN, Box 275, Watsonville, Cal.
HARPER, ROBERT F., 210 11th St.
HARRIS, SALLY P., 250 1st Ave. N., Minneapolis, Minn.
HARTLEY, HELEN S , 131 E. 19th St.
HARTNESS, GEORGE, 671 Clackamas St.
HARVEY, GEO. H., JR., 3102 W. 23rd Ave., Denver, Colo.
HARWOOD, AURELIA S., Corner 15th and Euclid Sts., Upland, Cal.
HAUGEN, MRS. OSCAR S., 1 Oregon Yacht Club, River Route.
HAWKINS, E. R., 423 E. 24th St. N.
HAWLEY, J. M., 834 Moreno Road, Santa Barbara, Cal.
HAYES, HARRY G., McKenzie Bridge, Ore.
HAZARD, JOSEPH T., Box 234, Seattle, Wash.
HAZEN, TODD, 602 Wilcox Bldg.
HEDENE, PAUL F., 720 E. 22nd St. N.
HEITMEYER, ADDA, 1103 Northwestern Bank Bldg.
HEIZER, NELLE, 790 Gantenbein Ave.
HELM, JEAN, 516 Patton Road.
HELSBY, BEATRICE, 304 S. High St., Oregon City, Ore.
HEMPY, RAYMOND, 1349 E. Madison St.
HENDERSON, G. P., 1155 E. Yamhill St.
HENDRICKSON, FAY, Insurance Dept., State House, Salem, Ore.
HENDRICKSON, J. HUNT, 610-11 Spalding Bldg.
HENKEL, FRED C., 273 Graham Ave.
HENRY, E. G., Newberg, Ore.
HENRY, LEONA, 670 E. 17th St. N.
HENRY, RUBY, 670 E. 17th St. N.
HENTHORNE, MARY C., 1798 E. Morrison St.
HENTHORNE, ORIL ELSIE, 315 11th St.
HEWITSON, JOHN R., 929 Gantenbein Ave.
HIBBARD, WAYNE, E., 213 Tilford Bldg.
HIGH, AUGUSTUS, Box 148, Central Sta.
HILTON, FRANK, 914 Porter Bldg.
HIMES, GEO. H., 253 Market St.
HINE, A. R., 955 E. Taylor St.
HOCKINSON, N. R., 339 Hancock St.
HODGE, EDWIN P., Quartz Hall, University of Oregon, Eugene, Ore.
HODGSON, CASPER W., Rookland Ave., Park Hill, Yonkers, N. Y.
HOGAN, CLARENCE, 862 E. 32nd St.N.
HOLCOMBE, GLENNA, 434 Larrabee St.
HOLLAND, MARVIN K., 1410 Yeon Bldg.
HOLMAN, F. C., Mer. Tr. Co., Sav. Un. Branch, 1 Grant Ave., San Francisco, Cal.
HOLMES, EDWIN L., Box 413.
HOPPER, ELIZABETH N., 310 Fitzpatrick Bldg.
HOWES, CORA M., 628 Montgomery Drive.
HOWLAND, LUTHER H., Selling Bldg.
HUFFMAN, DOROTHY L., 776 E. 80th St. N.
HUFFMAN, W. E., 776 E. 80th St. N.
HUIARD, MAURICE A., 1010 Thurman St.
HUNTER, BERTHA, 790 Gantenbein Ave.
HUNTER, JENNIE, 790 Gantenbein Ave.
HUTCHINSON, ALICE C., 701 Corbett Bldg.
HUTCHINSON, HAROLD T., 526 Artisans Bldg.
HUTCHINSON, ROBERT P., Hood River, Ore.

IMHAUS, N. E., Madison Park Apts., 262 Park St.
IMHAUS, NENI, care Oregon Journal.
IRWIN, BELLE, 362 Park St.
IVANAKEFF, PASHO, 246 Clackamas St.

JAEGER, J. P., 131 6th St.
JAENICKE, A. J., care U. S. Forest Service.
JAMES, NEILL, 2229 Kalia Road, Cottage 9, Waikiki Beach, Honolulu, T. H.
JENNER, SELMA, S., 335 14th St.
JENSMA, MARTHA, 123 E. 29th St. N.
JEPPESEN, ALICE, 256 Sutter St., San Francisco, Cal.
JOHNSON, ERMYL F., care Olds, Wortman & King.
JONES, FRANK I., 53 4th St.
JONES, MRS. FRANK I., 53 4th St.
JOY, ALICE L., 1236 E. 11th St. N.
JOYCE, ALICE V., 155 Montgomery St., San Francisco, Cal.
JOYCE, MILDRED A., 27 Cambrian Apts., 433 Columbia St.

KALTENBACH, ELSIE, St. Vincent's Hospital.
KARLSON, RUTH C., 124 E. 24th St. N.
KAUFMAN, VICTOR R., 723 Park Ave.
KELSEY, JOHN R., 871 E. 6th St. N.
KERR, D. T., 556 Morgan Bldg.
KETCHUM, VERNE L., 688 E. 43rd St. N.
KEYSER, CHARLES P., 1545 E. 31st St.
KIMMEY, PAUL C., Ins. Dept., Western Electric Co., Los Angeles, Cal.
KING, A. E., 7219 84th St. S. E.
KING, MRS. A. E., 7219 84th St. S. E.
KING, JAMES A., 706 Swetland Bldg.
KNAPP, EDNA, care Geo. Lawrence Co., 80 1st St.
KNIGHT, ODA, 1215 E. 24th St. N.
KNOWLTON, DOROTHY, 571 Elm St.
KOEHLER, K. H., care Eastern & Western Lbr. Co., Spalding Bldg.
KOENNECKE, MARIE, 489 Webster St.
KRESS, CHARLOTTE, 12-255 General Motors Bldg., Detroit, Mich.
KROHN, ROBERT, 311 E. 22nd St.
KRUMREY, ANNA M., 380 10th St.
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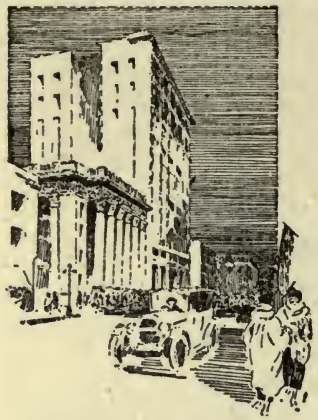

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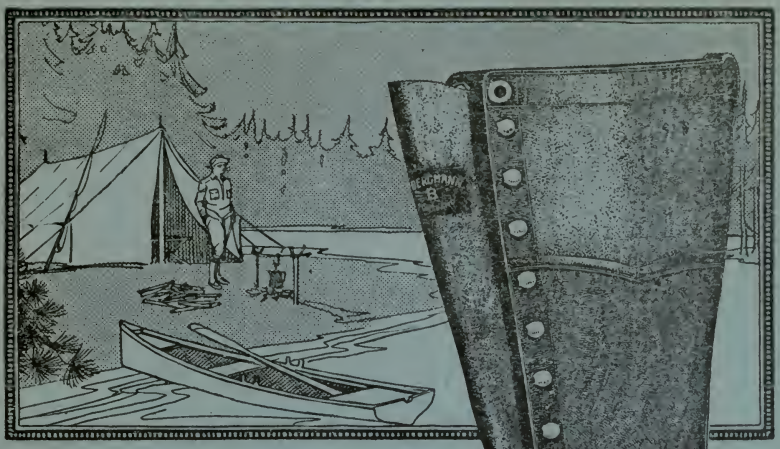

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